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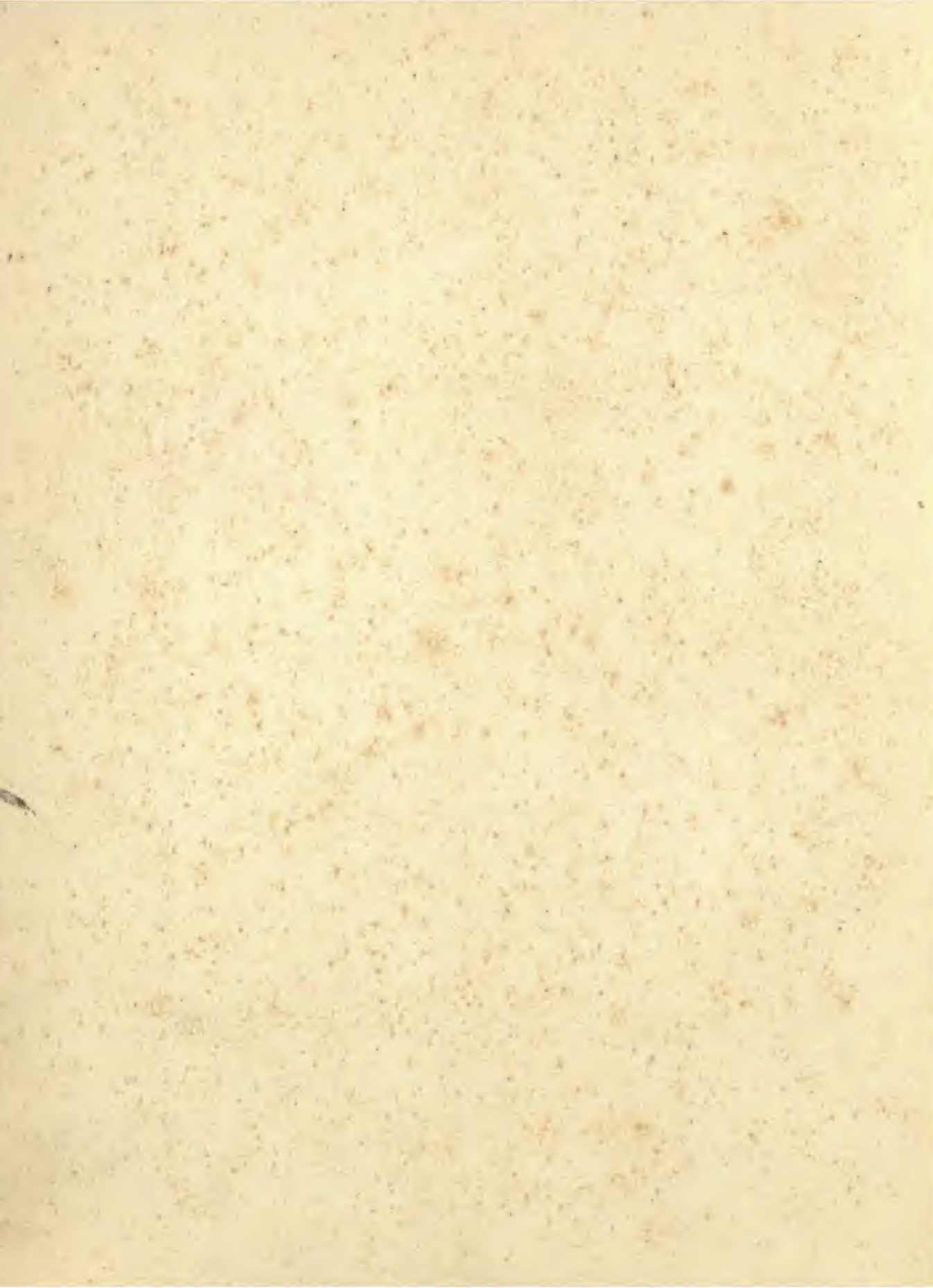
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THE ARCHITECTURAL ANTIQUITIES
OF WESTERN INDIA





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BY

HENRY COUSENS, M.R.A.S.

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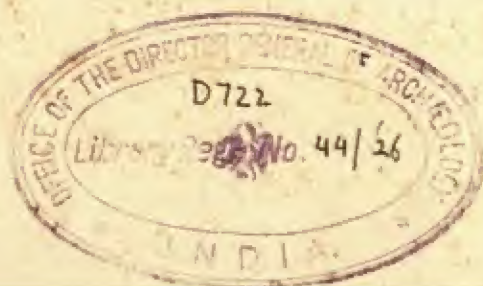
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THE ARCHITECTURAL ANTIQUITIES OF WESTERN INDIA

EARLY ARCHITECTURAL REMAINS

ARCHITECTURAL remains in Western India, so far as at present known, begin with the Buddhist period. There are found, in small numbers, rude stone monuments, such as dolmens and cromlechs, of uncertain age; but, though they may be considered buildings of sorts, they cannot be classed as architecture. Relics of very great antiquity have, recently, been brought to light in Sind, but it is doubtful whether anything in the shape of architecture, of the same period, will be found in connection with them. Apart from Sind, which is a most promising field for the spade and pick, and Gujarat, the rest of Western India gives but little hope of buried remains of any extent, since the rock comes so near the surface that there is seldom earth enough upon it to bury anything but small and recent objects. Much of what was left upon the surface from early times has been removed by the people as suitable material for building their village homes; and, in this respect, old brick buildings of all ages, when once abandoned, owing to dilapidation or desecration, have suffered badly, the old bricks being more easily handled than stone. Railways, roads, and canals have taken their toll of both brick and stone as ballast, road metal, and building material. The hand of the vandal has been very heavy.

In the following account, Western India will include, in addition to the Bombay Presidency with Sind, districts immediately contiguous, since territorial boundaries do not coincide with those of the various styles of architecture that will be noticed. Thus it will be necessary to overstep those boundaries into the Baroda State, the Nizam's

dominions, Maisur, and the Madras Presidency to pick up some out-lying examples of the styles described.

Scattered throughout the length of Western India, from the northern frontiers of Sind to the River Savitri, dropping suddenly in one great cascade, 830 feet, into the Konkan, and separating the Bombay Presidency from Maisur, is found as great and varied a collection of ancient monuments as are to be met with in any other part of India of equal extent; indeed, nine-tenths of the rock-cut temples of the Buddhists are to be found within this area. Buddhist, Jain, Hindu, Muhammadan, with the later Portuguese, Dutch, Armenian, and English remains, help to make up a goodly assortment. *Stupas*, cave and structural temples, mosques, tombs, palaces, forts, churches, convents, and graveyards are all represented, often quite near one another, succeeding each other from one end of the country to the other. Just as varied as these relics of the mason's craft are the peoples, languages, and religious beliefs which gave rise to them.

Apart from Muhammadan and European, there are practically no remains of civil architecture to be found. Wells and tanks there are, but these partake more of a religious character, it being a particularly meritorious action to construct them as ensuring a happier state in the hereafter. Hinduism was Hinduism, all over the country, and such was the case with other religions, so that all people respected the temples of their gods to whatever state they paid allegiance; they were spared during invasion and raids, and, generally, the persons of their priests were sacred. Not so with civil buildings, such as palaces, which an enemy showed no hesitation in demolishing. Hence the construction of buildings of that nature was a bad speculation, and they were run up cheaply, though, perhaps, of gaudy materials. They have all gone the way of those who built them, but we get some idea of what they were like from sculpture and painting, such as may be seen in the sculptures at the Sanchi tope and the frescoes at the Ajanta caves. Once a temple was desecrated it was abandoned, however costly a structure it may originally have been; it then fell a prey to the vandal for the sake of its material, or it was put to the basest of uses, from a cattle shelter to a village latrine. Many of the earliest temples,

following those of wooden construction, were of brick—firstly, brick with wooden door-frames, pillars, and beams, and then brick with stone door-frames, pillars, and beams. Of military architecture there is very little beyond the ruins of an occasional fort or town defences, until Muhammadan times.

Commencing, then, with Buddhist remains, in the absence of anything of Hindu origin claiming priority, the cave-temples stand first in Western India. Perhaps the predilection for cutting temples in the rock is to be found in the great desire for lasting merit, which the solid rock offers over a structural edifice; the merit gained by the act would last as long as the work. These rock-temples, and the monasteries and nunneries which generally accompanied them, are to be found, mostly, in the lonely defiles and ravines of the Western Ghats, but, in some cases, in or near ancient passes and communications leading up from the seaboard to the Dakhan above. Some, again, are found farther inland, cut in the sides of isolated hills and ranges. They were, thus, secluded from the busy centres of population, where the monks could, free from all distractions, concentrate their minds upon their studies and worship amidst the silence of the hills and forests. In these sequestered retreats they fashioned, in the bowels of the mountain, columned temples and halls, finished, to the minutest detail and ornament, with the utmost care. With wild beasts prowling around, they chanted their evening services, and then barred and bolted themselves in for the night. It must not be imagined that the cave-cutters chose natural caverns to facilitate their work, and enlarged and fashioned them to their requirements; a natural cavern means rotten rock, where fragments may drop at any time, and so make living within them very dangerous. They rather selected cliffs where the rock was solid and free from cracks and fissures, and the commencement of a cave, subsequently abandoned on account of hidden flaws showing themselves, may still be seen. The driving in of the shafts was all carried out by manual labour, no such thing as blasting helped them, nor would it have been allowed, for it would have loosened the rock overhead and have made it unsafe. From markings upon the surface in unfinished excavations it appears that a tool in the shape of

a heavy pickaxe was used for roughing out, and chisels for the finishing. The rock, in most cases, has been the Dakhan trap, no easy material to work in. Many of the caves, like the great cathedral at Karli (Plate 1), were built by subscription. We learn this from inscriptions, where we are told that such and such a man provided a pillar; in other words, as much money as would suffice to cut and finish one.

A close examination of these rock-temples shows that they follow wooden prototypes, and this may be seen in the Nasik caves, where not only are the beams and joists faithfully copied, but the wooden pins in the ends are not even omitted (Plate 2). In the earliest *chaityas*, which are vaulted chapels, wooden ribs exist to the present day, which were evidently added in imitation of the arched bamboos that supported the original thatch, and such primitive erections are still put up by the Todas of the Nilgiris. When the cave-cutters gained confidence in the stability of the rock, they ceased to use the wooden ribs and simply imitated them in the stone in the later examples. Since these temples were cut in the rock they have, with the exception of Kailasa at Elura, no exteriors beyond the façade; and that one does not help us to reconstruct those of the earlier caves, as that is a comparative late excavation whose exterior is just a copy of a Dravidian temple still existing. There is, however, an early *chaitya*, built in brick, at Ter, whose exterior gives us some idea of what the earlier ones were like, and is unmistakably derived from a thatched original (Plate 9). What the exterior of the flat-roofed temples or monasteries was like we cannot very well judge; they were, possibly, mud roofs on wooden beams and joists.

The great *chaitya*, or cathedral cave, at Karli, between Bombay and Poona, on the old line of communication between the Konkan and the Dakhan, by way of the Bhore Ghat, is the finest of its class (Plates 1 and 2). The outside has suffered badly by the fall of much of the rock face, which has carried away the greater part of the façade and court before the entrance. This might, in great measure, have been spared had the excavators properly drained the slope of the hill immediately above the façade. The inner façade is fairly well preserved, and is typical of most others of this class. It is a wall of rock closing

the front of the cave, and is pierced, below, with three doorways giving access to the nave and two side aisles respectively, and with a great horse-shoe archway above, which admits a flood of light and air into the interior. The light through this arch illumines the *dagoba*, the object of worship, which stands under the apse at the end of this basilica. In this bright lighting of the *dagoba* the *chaitya* is the complete antithesis of the Hindu temple, where the object of worship is engulfed in the gloom of an inner shrine, and where a lamp is always necessary to make it visible. Wood occurs, again, in the ornamental lattice in the top of the archway. Immediately below this, and above the doorways, is the music gallery, which must have been reached by a ladder, since no other means of access exist. Passing within, we find ourselves in a great cathedral-like nave, 45 feet high, with vaulted roof, supported upon two rows of columns, which continue round, and meet behind, the *dagoba*, and these are encircled, again, by narrow side aisles also meeting behind them. Owing to the columns being set very close together the side aisles are very dark. In the apsidal end of the nave, the ribs, in the roof, radiate from a centre above the *dagoba*. The length of the cave is 124 feet, and width, 45 feet 6 inches. The earliest *chaityas* are very plain, as a rule, but this one is freely adorned with figure sculpture and a kind of basket-work ornament very common in caves of this age. Above the columns, and under the architrave, are groups of persons upon elephants, all well carved. These face inwards to the central nave; but, facing into the side aisles, are men upon horses, and the latter seem relegated to this position, in the dark, since the horses were failures compared with the elephants. The pot bases and capitals of the columns are very characteristic of this period—about the beginning of the Christian era. The *dagoba* is a representation of a *stupa* or burial mound; in this case, the *stupas* built over the Buddha's ashes. It was the first, and only object of worship, in the early caves: subsequently the image of the Buddha was introduced. Surmounting the *dagoba* is the Tee, over which, again, is a wooden umbrella, which, constructed of boards, dips on two sides only and not all around. This is carved on the underside, but the smoke and dirt that have accumulated upon it prevent it being seen from below.

In the top of the Tee, under the umbrella, is a deep square hole, which, when we opened it, probably for the first time since the cave was abandoned by the priests, was found to be full of ancient sawdust in which, very likely, some relic had been deposited, and secured by the close fitting stone lid. The outside of the façade had, originally, a number of large inscriptions, some of which have been cut into, at a later time, when pairs of erotic figures were sculptured. In the north and south ends of the forecourt are sculptured life-sized elephants, standing forward in half relief from the walls, and, above them, are other pairs of figures, but which are of better proportions than those below, and may be original. Just in advance of the outer façade screen, which has mostly fallen away, is a tall pillar surmounted by a lion, on the shaft of which are inscriptions. Although these give no date, the style of the letters, and the architecture of the cave, would put the *chaitya* at about the beginning of the first century before Christ.

Other *chaityas* of note are found at Bhaja and Bedsa, in the range of hills opposite Karli, Elura, Ajanta, Nasik, Junnar, Kondani, and Pitalkhora. They vary in details from the plainest at Junnar to the ornate ones at Ajanta (Plate 3). The outer façades of many of these, like that at Karli, have been destroyed. The Visvakarma cave at Elura is about the most perfect.

The flat-roofed caves were the residences of the monks, and their refectories. Around the central hall are little cells, each with a stone bench, against one wall, to sleep upon. The cells, in some cases, had doors fitted to them, and, as very little air could enter the cave by the main door, and, perhaps, a window, or two, one can imagine what the interior must have been like when these were shut up for the night. Some of the later *viharas*, for they go by this name, had, in addition to the sleeping cells, a larger one off the back wall, which served as a shrine for a colossal Buddha—a private chapel, in fact. In addition to the caves, rock-cut cisterns were always provided, which were supplied by springs and by water running down the hill face and guided to them by surface channels. In a refectory cave at Kanheri, near Bombay, there are long, low stone tables running down the length of the room, along each side of which the monks sat on the floor.

There are some interesting caves in a range of hills just outside the town of Aurangabad—not the famous Elura caves, which are much farther away. They are Buddhist, in three groups, about three quarters of a mile apart. The largest cave, in the first group, is very much like the larger *viharas* at Ajanta, with the same type of pillars (Plate 4). On entering the shrine, in which is a colossal Buddha, and after getting accustomed to the gloom, groups of life-sized figures, to the right and left, kneeling out upon the floor, loom up out of the darkness and are rather startling; it requires a second look to know that they are not really living beings. There are thirteen figures altogether. They are remarkable for their head-dresses, which are full wigs, in horizontal and vertical curls, and their features are very Egyptian in outline. Such wigged images are found in old temples of the sixth and seventh centuries, and one was found in the *stupa* which was excavated at Mirpur-Khas in Sind (Plate 14).

In the second group of caves is one which, judging from the images upon it, was possibly a nunnery. Nearly all the images, and those the principal ones, are of females, whose head-dresses surpass those of the worshippers, in the cave in the first group, in gorgeousness. Those of the chief ladies remind one much of the bearskins of the Guards interwoven with strings of jewels and flowers.

Another piece of sculpture in this last cave is worthy of notice, as it is rather rare, and this is a good example. It represents Avalokitesvara or Padmapani, of colossal proportions, standing full to the front, with eight little groups, four up each side of him. This represents the Buddhist litany. The top group shows two persons kneeling, and beseeching him to save them from fire which rises in a mass of flames behind them. The second asks for protection from the sword; the next, from captivity; the lowest, from shipwreck. The top, on his left, desire to be protected from lions; the next, from serpents; the next, from wild elephants; while the lowest shows disease and death in the shape of an old hag.

There are remains of painting upon the ceiling of one of these caves, where the Greek fret or key pattern is seen.

“STUPAS” OR CINERARY MOUNDS

STUPAS were, originally, great mounds of earth raised over the ashes of a chief or religious leader, and surrounded by wooden rails to protect them. Later they were built in brick or stone with an earthen core, a stone railing taking the place of a wooden one. Later on, again, the hemispherical mound was raised upon a dwarf cylindrical drum, leaving a passage round the dome for circumambulation in connection with funeral rites. Such is the general shape of the early *stupas* built over the relics or ashes of the Buddha and important priests; but, by degrees, the height of the basement increased until the shape as seen in the *stupa* known as Thul Mir Rukan was reached (Plate 10). This is, more or less, the shape of the rock-cut *dagobas*, or imitation *stupas*, found in the cave temples. Decoration was lavishly applied to the exterior, on both stone and brick, the ornamental details being worked out in the brick as delicately as in the stone. The *stupas* that have, up to the present, been found or uncovered in Western India are of brick. The great Boria *stupa*, discovered and excavated in Kathiwad, had a solid burnt brick core, but the find of a few sculptured marble slabs showed that some stone work existed, probably as railing and crowning umbrella. In the Bombay Presidency proper we have discovered three stupas, or rather the remains of them—namely, that in the jungles near Junagadh, already referred to; one near the village of Supara, 33 miles north of Bombay, supposed to be the Ophir of King Solomon's time; and one at Kolhapur, in the Southern Maratha country. None of these gives us any clue as to their original shape, so ruined are they. In Sind, however, from a study of that of Mir Rukan and the remains of the one unearthed at Mirpur-Khas (Plate 11), it is possible to reconstruct such as were built in that province. From the top of a high square basement rose a cylindrical tower, finishing off in a dome, on

the top of which was, probably, a Tee and umbrella in stone or wood. The sides of the tower had a slight slant, as may be seen in the photograph of Thul Mir Rukan. The square basement of that *stupa* has been destroyed, but the broken brickwork of the lower part of the tower shows where it surrounded it. The core of these *stupas* was generally built of sun-dried bricks, while the exterior casing was of burnt brick, so well made that much of it, especially the decorative parts, might be termed terra-cotta.

The general scheme of decoration consisted of rows of flat pilasters, in tiers one above the other in the towers, standing upon a deep moulded base, with niches between the pilasters containing images of the Buddha. Highly decorative string courses further adorned the walls. Much of the ornament, especially the quasi-Corinthian capitals of the pilasters, has a classic look, and some details are almost line for line copies. Around these *stupas* there appear to have been other religious buildings, judging from the number of foundations found around that of Mirpur-Khas. These were, no doubt, monasteries for the monks, who lived upon the offerings of the faithful. Amongst the ruins have been found portions of small votive *stupas*, and quantities of clay tablets such as Chach found the *samani* making at the monastery near Brahmanabad when he visited him.

Buried within the cinerary *stupas* were the ashes and other relics, together with a miscellaneous collection of offerings, a small burnt brick chamber receiving them. In the *stupa* which was unearthed at Mirpur-Khas, in Sind, was found a roughly dressed block of stone, in the flat top of which was a cup-shaped depression in which was a small rock crystal bottle, within which, again, was a small silver case about the size round of a lead pencil, within which was still another case, of gold, containing a small particle about the size of a pin's head. That this was the relic there seems to be no doubt, since the silver case was wrapped round with gold leaf that had not been disturbed, and was fresh and untarnished. In the crystal bottle, beneath, but not in the gold and silver cases, was a quantity—about an egg-spoonful—of ash, apparently bone ash. Another block of stone, with a corresponding cup-shaped hollow, but shallower, capped the first stone, and the space

around the crystal bottle was filled with sand, in which were a quantity of seed-pearls, coral and crystal beads, a copper ring, a small gold ring, and some copper coins.*

In the *stupa* at Supara was found a more elaborate stone receptacle, which had been carefully moulded and turned with a proper lid, and, within this, the relic was found enclosed within several small reliquaries, one within the other, surrounded by eight bronze images. The *stupa*, of brick, was almost entirely destroyed.† In the great Boria *stupa*, in the jungles near Junagadh, in Kathiawad, the burnt brick seemed to have been used throughout the building, and the relics were found embedded in this at a considerable distance above ground level. As at Mirpur-Khas, the little caskets containing them were in a cup-shaped hollow in the top of a roughly dressed block of stone. The caskets were of stone, copper, silver, and gold, one within the other. The relic was a small chip as big as one's small finger nail and about an eighth of an inch thick.‡

Other *stupas* that have been found in Sind are that near Tando Muhammad Khan, one at Depar Ghangro, near Brahmanabad, and one at Mohen-jo-dhaddo, north of Sehwan. These link up with others in the Panjab which join those in the Kashmir valleys and neighbourhood.

Besides the cinerary *stupas*, others were built to commemorate places where the Buddha is supposed to have halted when in Sind. The Chinese pilgrim, Hiuen Tsiang, in the seventh century, wrote: "When Tathagata was in the world, he frequently passed through this country, therefore Asoka-rajah has founded several tens of *stupas* in places where the sacred traces of his presence were found. Upagupta, the great Arhat, sojourned in this kingdom, explaining the law and convincing and guiding men. The places where he stopped and the traces he left are all commemorated by the building of *sangharamas* and the erection of *stupas*. These buildings are seen everywhere." He also

* These are all described in full in my volume upon the "Antiquities of Sind," now in the Press.

† Described in the "Journal Bombay Branch R.A.S.," XV, 273.

‡ A further account of this *stupa* will be found in the "Journal of the Asiatic Society of Bengal," LX, Part I, No. 2, 1891 (Misc.).

tells us that, in his day, there were several hundred *sangharamas* in Sind, occupied by about 10,000 priests, and that they studied the Little Vehicle. The *thul* Mir Rukan was possibly one of these commemorative *stupas*, no relics having been found when it was examined many years ago; but I am not satisfied on this point.

EARLY STRUCTURAL TEMPLES

THE earliest structural temple in Western India is, as far as we know, without doubt, the Buddhist brick *chaitya* at Ter, in H.E.H. the Nizam's dominions, and about 30 miles east of Barsi (Plate 9). The late Dr. Fleet identified this place with the long-sought site of the ancient city of Tagara of the early Greek geographers, and an examination of the place, made subsequently, shows that an ancient city did occupy this position. Heavy brick foundations are seen, from which the villagers still dig out the bricks. It was, evidently, a place of some importance, first with the Buddhists, and then with the Hindus and Jains, and the place has its traditions and legends, though the latter do not help us in the identification. Most important, among the remains, is the old brick *chaitya*, standing in the village and facing east, which has been appropriated by the Vaishnavas for the worship of one of Vishnu's *avatars*, or incarnations, Trivikrama. The image now occupies the position of the *dagoba*, portions of which were found lying about. The building consists of the vaulted *chaitya* with a flat-roofed hall before it. The former measures 31 feet long by 33 feet high. It is just a plain copy, in brick, of the rock-cut *chaitya*, whose waggon-vaulted roof rises to a ridge on the outside, and is completed with an apsidal end. The façade, above the hall roof, is a rough counterpart of that of the rock-cut Visvakarma cave at Elura, excepting, perhaps, the little niche holding a Hindu image, which is, probably, a later addition. There was, in all likelihood, a small window here to let light into the interior. Heavy mouldings, around the base of the walls and the eaves, with slender pilasters between them, are the only decoration on the outside walls, over which was a coating of plaster. There are no pillars within the *chaitya*, its small size not requiring them. The lotus ornament upon some of the sculptured stone fragments, is very

similar to what is found upon the Sanchi *stupa* and that which stood at Amravati, near Bezvada.

There were also found at Ter several old brick temples in the early Dravidian style such as are found in stone at Pattadakal and neighbourhood, with all their decorative details reproduced in moulded brick. They are of the same style and age as the old ones at Kukkanur, in the Nizam's dominions, and may not be later than the seventh or eighth centuries, but perhaps older. The doors, beams, and ceilings are of wood, richly carved, stone being used nowhere. In this respect they differ from the old brick temples at Sirpur, in the Central Provinces, of the seventh and eighth centuries, where stone has been used for these parts. It was not because stone was unprocurable, for the country is all trap rock, in which cave temples have been cut at Dharasena (now Osmanabad), 12 miles south-west of Ter. The woodwork here is reminiscent of similar old work found upon very old temples in the Chamba Valley in the Himalayas. They are dedicated, as they always have been, to the older Vaishnava worship. Outside the village, on the south and west, are great mounds from which the bricks are taken. The original city overflowed to the opposite side of the river on the east, where huge mounds of débris still exist. No exploration has yet been undertaken at Ter.

For other very early temples we must turn to Kathiawad and the Bijapur district of the Bombay Presidency. Along the southern shore of Kathiawad are found a few old shrines which bear a striking resemblance to those very early ones in Kasmir. The best and oldest example is that at Gop, in the Barda Hills (Plate 15). Of this particular temple, which is considered the oldest in Kathiawad, little remains—the interior walls and roof of the cella. It is so remarkably Kasmirian in style that there can be little doubt of its place of origin. The stepped-out pyramidal roof, with its prominent window-like arched niches, and the trefoil arches around its basement, are marked features of the northern style. There are, however, considerable modifications of these in the next older temples found along this coast, due, no doubt, to the descendants of the builders of the Gop temple, settled in Kathiawad, losing touch with those of the north, and introducing

modified and new features of their own invention. This is seen in the temples at Kadvar, Bilesvara, Sutrapada (Plate 16), and a few other places along the coast line, which, without the Gop example, might have suggested an indigenous origin. The little arched niches, upon the tower, with, sometimes, little heads in them, are but miniature imitations of the great arched façades of the cave *chaityas* of the Buddhists, such as is seen in the photograph on Plate 3. In the Buddhist caves they are also found as a small ornament, placed at short intervals along the larger heavy mouldings, and are frequently shown with heads in them. They also occur in the old brick temples at Ter, and are continued, more or less modified, in the medieval Solanki and Chalukyan shrines, as will be seen farther on.

Passing to the southern end of the Presidency, old temples of about the same age—that is, between the sixth and eighth centuries—are found in many respects strangely like these old temples in Kathiawad; but these, instead of travelling down from the north, had their origin in the old Dravidian or Pallava buildings of the south of India. They are found chiefly in the villages of Aihole and Pattadakal, in the Bijapur district, and the immediate neighbourhood. The Kathiawad temples have, in their *sikharas* or towers, the same stepped-out pyramidal arrangement, heavy mouldings, quarter round in section, and the same comparatively plain walls, decorated, when decorated at all, with shallow pilasters at intervals, so very unlike the much cut up and highly decorated surfaces of the later Solanki period. The plans, too, in their simple designs, are much alike; indeed, the older Dravidian or early Chalukyan, since this style was followed by the early Chalukyan builders, corresponds to the northern examples, not only in the contrast of styles as compared with the later work, but even in their dates. The Chalukyas, like their kinsmen the Solankis, were great temple builders; but, as the latter did not come into power until the end of the tenth century, the former had several hundred years' start of them. The oldest dated building of the early Chalukyas that we know of is the temple of Meguti at Aihole—a purely Dravidian one (Plate 17). Here there is a definite date to start from, for an inscription upon a large slab, built into its eastern wall, tells us it was built by the

Western Chalukyan King Pulikesin II. in the *Saka* year 556 (A.D. 634-5). It gives no information of the origin of the Chalukyas, but they are said to have come from Ayodhya in Northern India. They lived under the guardianship of the Seven Mothers, or *Saptamatri*, and their favourite deity was Kartikeya, the god of war, while the god Narayana presented them with the boar standard. The early Chalukyas followed the Vaishnava cult, but, later on, they were equally attached to the Saiva. The country, over which they eventually held sway, embraced the southern portion of the Bombay Presidency with part of the Nizam's dominions adjoining, the northern part of Maisur, and portions of the Konkan. The extent of their possessions varied considerably at different periods, according to their fortunes of war with their neighbours.

Unfortunately, this temple of Meguti is not complete, having suffered badly at the hands of Time and the vandal. It is possible that it was never completed, the lower stage of the tower being left as we find it. The interior is very dark, due, in some measure, to the sides of the hall having been walled up, and dwarf rubble walls added to its roof, with pot tiles through them for shooting through, at some late period when the temple was used as a place of defence. Windows in Hindu temples are purely ornamental, the interstices in the trellis and arabesque designs admit but a very little amount of light, and only make the gloom between them all the more dense; and one has to be careful not to stumble over a dethroned deity or drop into hollows from which the paving stones have been taken. The windows in Meguti are no exception to the rule. Peering through this semi-darkness, where the oil lamp has long ceased to burn, is seen a colossal Jin seated upon his throne, too large to have been brought in through the doorway. It was probably placed in position before the walls were raised. There is nothing to show which *tirthankara* it is intended to represent. Lying in the passage around the shrine is a great slab bearing an image of a *devi*, which seems to represent Ambadevi or Ambaji, a favourite goddess with the Jains, whose two children are held by attendants, one on either side. The walls of the shrine run up through the roof and form the sides of the

first story of the tower, which frequently contains an upper shrine in Jain temples.

The outer walls are very plain, being relieved by alternate square projections and recesses. It was intended to embellish the exterior with sculpture, for the faces of some of the panels have been left rough for this purpose, and intermediate ones are sunk to receive loose images, some of which were found lying about. A band of small figures in panels, with some arabesque, runs round the plinth.

Just below the brow of the hill upon which Meguti stands, and not far from it, is a curious two-storied temple which is partly structural and partly excavated in the rock. It consists of two long verandahs, one above the other, with a frontage of four heavy square pillars and two pilasters. Off the verandah of the upper story are a long room and three shrines, cut in the rock, and off the lower is the beginning of a shrine. In relief, upon the centre of the upper verandah ceiling, in front of the shrine door, is a figure of a small, seated, clothed (*Swetambara*) Jina, with a triple umbrella above him.

Older, perhaps, than Meguti is the temple of Lad Khan in the middle of the village (Plate 18). There is an inscription upon the front wall, in characters of the eighth or ninth century, recording a grant, but, as it has no reference to the temple, the latter was only a convenient and permanent place to record it. There is no temple that impresses one so much with its cave-like character. Its general massiveness, its unnecessarily heavy columns, the simplicity of its construction, and its plan and details have much more in common with cave architecture than later temples have—and with cave architecture not of the latest. The wooden forms, from which cave architecture sprang, are seen throughout. The pillars are the most characteristic feature, being remarkable for their great massiveness, and are more suited to support the heavy rock roof in a cave than the lighter one of a structural temple. The rock cutters, when they built this, had not then learnt much concerning the relative strength of materials, and so transferred their cave-cutting proportions to this building. A comparison may be made between this and the interior of the Tin Tal cave at Elura (Plate 4). The walls are not walls in

the ordinary sense of stone masonry, being composed of posts, at intervals, joined up by stone screens containing lattice windows, just as might be expected in wooden framing. Sometimes these lattice windows, in early buildings, are carved in imitation of reticulated bamboo work. The flat roof, and its want of elevation, are cave-like characteristics; but, more than anything else, the massive pillars, with their roll bracket-capitals, evince a simpler and more dignified style than many of those decorated ones in Cave III. at Badami, a few miles away, which was excavated about A.D. 578 by Mangalesvara, the predecessor of Pulikesi II., and have certainly an air of greater age than that cave.

The very unusual position of the shrine, which is placed *within* the great hall and *against* the back wall, has a very primitive look. At first sight, it would seem that the building had been intended as a simple hall or *matha* in which, by an afterthought, a shrine was clumsily inserted to convert it into a temple. But this was not so, as is clearly shown by the fact that, in the similar temples of the Kont-Gudi group in the village, the beam from pillar to pillar, before the shrine, has been placed on a higher level in the original construction, in order to admit of the lofty doorway being seen to its full height, and lion brackets project beneath the beams, one on each side, to further decorate the entrance to the shrine. The panel of the wall of the hall, at the back, is blank, whereas those on either side of it are perforated with windows. In the cave-temples we find shrines within the main hall, notably at the Dumar Lena at Elura and at Elephanta, and in structural temples in the north, such as that of Bilesvara, in Kathiawad. The temple of Lad Khan was Vaishnava, but, at present, it contains the *linga* and Siva's bull. On the block, above the shrine door, which is the safest indication of the original dedication of the temple, is Garuda, the vehicle of Vishnu.

Though the decorative details on this temple are spare, they are vigorous and expressive; they are suited to their positions, and are not so crowded and meaningless as they are in many later buildings. The windows around the building are, as in Meguti, of perforated slabs in various patterns; but the most decorated part of the temple is the

front porch, the pillars of which have life-sized images upon them in bold relief. The water-pot ornament, which is seen here, is a very favourite device in the decorative details of many of these old temples, and it occurs much elaborated with foliage in the caves. It is found, again, but conventionalised, in the later medieval temples of North Gujarat as part of the design of many of the pillars.

Another temple at this village, remarkable in its great likeness to the *chaitya* caves, is that called the Durga temple, not on account of its dedication to the goddess of that name, *durga* also meaning a "fort," and it being within its precincts. Its plan is practically the same as the Buddhist cathedral caves. As in these and the old *chaitya* at Ter, the end of the temple is round or apsidal, and it has a central nave and side aisles separated by rows of pillars. But, in the place where the *dagoba* would be, is a shrine for an image. It was not so easy, here, to imitate the vaulted roof of the *chaitya* as it was at Ter in brick, so the nearest approach to it is the lofty central roof with a lower sloping roof of slabs over the aisles. Above the shrine, however, rises a *sikhara*, or tower, which the Buddhists do not appear to have had. This tower, in what has been called the northern style, is similar to those of about the same age in Orissa. Unfortunately, the upper part has fallen, but a more complete example is that of the temple known as Huchchimalli-Gudi outside the village.* Surrounding the temple, outside, is a pillared verandah, which broadens out in front to form an open pillared hall, or porch. The pillars are not quite so massive as those in Lad Khan, but still preserve the same simplicity of design, being square blocks, without bases, surmounted by very plain bracket-capitals. Those in the front porch are adorned with pairs of human figures in full relief, and some are further enriched with bands and medallions of arabesque.

The images in the niches around the walls, outside, are an impartial mixture of Saiva and Vaishnava deities; for in those early days there was not that sharp division between the two cults that crept in in later times, especially with the rise of the Lingaits. There is no doubt

* These *sikharas* are described in Fergusson's "Indian and Eastern Architecture," Vol. II, pp. 96 and 98.

that the temple was originally Vaishnava, like that of Lad Khan, for, over the shrine door, Garuda, the vehicle of Vishnu, presides. In each hand he grasps the tail of a Naga which continues down each side to the upturned body. The doorway is much after the style of those of the *viharas* at Ajanta. The central niche, at the back of the temple, which generally gives a clue to the deity originally occupying the shrine, has been removed; and the absence of this image from other old temples would lead one to believe that it was intentional, the removal having been due to some other sect who had subsequently appropriated the temple to their own form of worship. It is quite possible that the Durga temple was dedicated to the Sun-god, Surya.

It is interesting to find, not only here but also at Pattadakal, a few miles away, examples of the northern type of tower side by side with others of the Dravidian, making this district a kind of meeting-ground of the two. It is from the blending of these two that the later Chalukyan style was evolved, though it eventually became a separate local style of its own (Plate 17).

The temple of Huchchimalli, in the fields a short distance away, is possibly older than the Durga one, which might be considered contemporary with Cave III. at Badami. Its general style and heavier cyclopean masonry give it a more ancient appearance, and it is certainly older than Meguti. Here, again, the shrine is contained within the hall, being placed towards the east end so that a passage, or *pradakshina* path, is left around it. As already mentioned, this temple has a spire in the northern style, but its details are more archaic-looking than in that of the Durga temple. It is interesting to compare it with the temple of Parasuramesvara at Bhuvanesvara, in Orissa,* when it will be seen how strikingly alike they are. Fergusson, in his first edition of his "History of Indian and Eastern Architecture," was inclined to place the tower of the latter temple, with its cella, at about A.D. 450, the *mandapa*, or hall, a little later. In the revised edition, Dr. Burgess has brought the date down to the seventh or eighth century, but this is, probably, too late an estimate. The outline of

* Fergusson's "History of Indian and Eastern Architecture," Vol. II, p. 96.

the tower has an older look than the Aihole one, though, in its details, the latter is simpler and heavier looking. But, in judging the age of these temples, local peculiarities have to be taken into account.

The interior of the temple is perfectly plain, excepting the shrine doorway, which follows the style of some of the cave doorways. It will be noticed that there are no pilasters in the walls opposite the pillars as found in later temples. The interior of the shrine has been totally wrecked, most likely by treasure hunters, and the paving of the floor is in great disorder. Unlike the last two temples we have considered, which face east, this one faces the west. Meguti, being a Jain temple, and not bound to any particular direction, faces the north. In the porch ceiling is a representation of Kartikeya, the god of war, from which it is evident that the original dedication was Saiva. Upon the front of the temple is an old Kanarese inscription which records a grant of oil to the priest of the temple by the king, Vijayaditya, in A.D. 708.

It is necessary to pass briefly over other temples in the village, of which there are many, and all of more or less interest. The temple known as the Kont-Gudi, which is of the same style as Lad Khan, and, like it and most of the other temples in the village, in disuse and neglected, is another Vaishnava shrine which faces the west. In the hall, the shrine stands against the back wall and is more clumsily placed than in Lad Khan. The central ceiling has an *ashtadikpala* slab such as is frequently found in later temples. It is divided into nine compartments, in the centre of which is Brahma, while the other eight contain the eight regents of the points of the compass. Garuda presides above the shrine doorway. Beside this temple there are others, one being still embedded within the walls of the adjoining houses and used as a dwelling.

Another interesting temple is in the fields to the south of the village. This is in the same heavy massive style, but, in this case, it is an advance upon the others in that it has a separate shrine in continuation of the hall, with an almost complete tower of the northern type. It has also image niches round the outside of the shrine walls. In the central aisle, above the pillars, are some vigorous and well-carved

bands of dwarf-like figures and arabesque, while spanning the architrave are great ceiling slabs, or rather were, for three, upon which are representations of various deities, had been carried away many years ago. Upon the dedicatory block we again find Garuda. The shrine, which has been badly upset, has part of the seat of the image within it. Upon the front of the tower is a large slab bearing the *tandava*, or dance, of Siva, but this, and a similar one upon Huchchimalli-Gudi, both loose, were probably placed there at a later time. Upon the south side of the temple is an inscription, in letters of the seventh or eighth century, which seem to record the name of an architect. It runs thus: "Hail! There has not been, and there shall not be, in Jambudvipa, any wise man, proficient in (the art of building) houses and temples equal to Narasobba." This may be the name of the man who had charge of the reconversion to Saiva use.

The method of roofing the halls of these temples is worthy of notice. The nave is covered over with great flat slabs lying across from one architrave to the other, and the side aisles are covered by similar slabs which slope downwards to the outer walls. As the stones are not so accurately dressed as to make them watertight, the joints are covered by long narrow stones, grooved on their undersides, and fitting into channels, cut down each side of the joint, in the slabs. The one thus lies over and fits into the lower, much like the half-pot tiles in ordinary native roofing.

Pattadakal, or, as it was known in ancient times, Pattada-Kisuvolal, is now an insignificant little village, tucked away in rather an out-of-the-way corner of the Badami district; but it must have been at one time a great centre of religious activity, and, with Aihole and Badami, an important spot in the kingdom of the early Chalukyas. When approaching the village, one notices the many old temple towers which rise above the roofs of the mud-walled houses (Plate 17). There are old shrines, both in the Dravidian and northern styles, standing side by side. Among the former are the three largest and most interesting, since their inscriptions leave us in no doubt as to their origin.

It will be sufficient to describe two or three. The first and most important, and one that appears to have been in uninterrupted use all

down through the ages by the Saiva community is that of Virupaksha (Plate 20). While others have lost their original names, this one has retained that of the deity to which it was at first dedicated. Though much later than those at Aihole, it has much of their cyclopean style of masonry. It is, however, a far larger building, and is a great deal more imposing. An inscription tells us that it was built for Lokamahadevi, the Queen-Consort of King Vikramaditya II., a descendant of Pulikesi, who erected Meguti at Aihole, in commemoration of his having thrice conquered the Pallavas of Kanchi (Conjeveram). He reigned in the middle of the eighth century. In the temple of Rajasimhesvara, at Conjeveram, he left an inscription, which tells that he did not confiscate the property of the temple, but returned it to the god. Again, the Vakkaleri copper-plate grant of his son Kirtivarman tells us that, after Vikramaditya's conquest of Kanchi, he made gifts to the Rajasimhesvara temple, and was so impressed with the images and the other sculpture that he saw there, that he had them overlaid with gold. There is so much in common between that temple and Virupaksha that there can be no doubt that he brought away architects and masons to build another like it at his own capital. And this seems to be confirmed in one of the inscriptions at Pattadakal which speaks of the builder of Lokesvara (Virupaksha) as the most eminent *sutradhari* (architect) of the southern country. Upon the temple of Papanatha, a short distance to the south of Virupaksha, is an inscription in praise of a certain Chattara-Revadi-Ovajja, who is said to have "made the southern country"—that is, was the builder of the temples of the southern country, and hence, by inference, the builder of this one. He belonged to the same guild, the Sarvasiddhiacharyas, as the builder of Virupaksha. The monolithic temple of Kailasa, at Elura, already mentioned, is, to all intents and purposes, a copy of this temple, although cut out of the solid rock, not as a cave, but as a complete structural temple. In the reign of Vikramaditya's son, Dantidurga, of the Dakhan, led a Rashtrakuta army against the Chalukyas and took possession of the bulk of their territories. At this time Dantidurga was cutting caves at Elura, so that it is more than probable that he was so impressed with Virupaksha

that he had it copied in the rock by his cave-cutters. The line of small elephants around the base of Virupaksha was represented in Kailasa by almost life-sized ones, since it was necessary to raise the temple somewhat out of the pit in which it is cut. It is the most northern example of Dravidian work (Plate 6).

The temple of Virupaksha consists of the sanctum containing the great *linga*, or phallus, the spacious pillared hall with its porches, the Nandi pavilion before it, sheltering the bull of Siva, and the eastern and western courtyard gateways, linked up by the engirdling walls. Over all, it measures 250 feet, of which the main building occupies a length of 120 feet. Within the hall are eighteen heavy square pillars supporting the roof, being arranged in four rows from east to west, the two central rows having five pillars in each. The pillars are all of one pattern, only the sculptures upon them differing; and the very deep architraves above them divide the whole ceiling into parallel aisles running east and west. This arrangement is different to that usually followed in later temples, where the pillars are arranged around a central square, the compartments of the ceiling corresponding. Like those in Lad Khan's temple at Aihole, these pillars have no bases; a roll bracket capital spreads the bearing under the beam above. Upon the pillars are broad bands of bas-reliefs representing scenes from the Mahabharata and Ramayana.

The exterior of the temple is a mass of heavy mouldings and sculpture. The former run round the high basement and are very vigorous and effective. They also follow the eaves of the main walls as well as those of the stories of the tower. The sculptures, unlike the stiff conventional forms of later Chalukyan work, are natural and forcible, and they need no labels to assist in interpreting them. The beautiful perforated scroll-patterned windows form one of the finest features of the building.

We are informed by the inscriptions that the junior queen of Vikramaditya, Trailokyamahadevi, a sister of Lokamahadevi, also built a temple to the north of Lokeshvara, which is easily identified with that now known as Mallikarjuna, whose courtyard touches that of Virupaksha at its north-west corner. The inscription which gives us this

information also says that Virupaksha or Lokeshvara was built to the south of the temple of Vijayeshvara, which was erected by Vijayaditya-Satyashraya (A.D. 696-733). This temple, too, exists, though neglected, in the position described, under the name of Sangamesvara. It is a very plain, simple, and massive building, but its hall has been badly damaged. An inscription upon a large slab, which has been placed inside the temple for safety, records a grant to the temple of the god Vijayeshvara. The name occurs several times in short inscriptions upon the pillars.

The temple of Trailokyesvara, or Mallikarjuna, standing between the other two, is of the same general plan and design as that of Virupaksha; the interiors, save for a slight increase in the width of the latter, being exactly the same, even to the two little shrines, one on either side of the entrance to the main shrine. It has not, however, been completed, some of the shadowy forms of the sculpture, in places, only just emerging from the rough. A comparison of the towers of the two temples, Trailokyesvara and Lokeshvara, shows that they are alike in all respects save for the crowning member which, in the former, is round instead of square. There is no doubt that the square form of Virupaksha is more in keeping with the rest of the tower. At Kailasa this member is octagonal. Garuda presides over the shrine door, and thus indicates that this temple was dedicated to Vaishnava worship.

The temple of Papanatha, in the south of the village, strikes quite a new note (Plate 21). Its tower, which is fairly complete, is in the northern style. Like the others, it faces east. It was built originally for Vaishnava use, and was possibly dedicated to Surya-Narayana, or the Sun-god; for, though Papanatha is a name of Siva, and was possibly given to it by the Lingaists in later times, Garuda, the vehicle of Vishnu, is found above the shrine doorway and that of the inner hall. In the niche, at the back of the shrine, in the *pradakshina*, or circum-ambulatory passage round it, is an image of Surya. Instead of an image, a buckle-like ornament occupies the dedicatory block over the outer or main doorway. The temple is in disuse as such, but is used as a byre, cattle being tethered within, and along its walls without.

This is probably an older temple than that of Virupaksha, though the pillars within, with their bases and cushion capitals, might suggest a later date. They are, however, clumsy, and are not so well designed as those of a somewhat similar pattern in the caves of Ajanta. Though, at first sight, it looks very unlike Virupaksha, it will be found that the difference is almost confined to the tower. Its plan is but a modification of its neighbour; in fact, it is a nearer approach to that of Kailasanatha at Conjeveram than to Virupaksha. The outer walls are practically the same as those of the latter, a variation in the arrangement of the sculptured panels alone being made. These temples, with northern spires, are not a class by themselves apart, architecturally, from those bearing Dravidian spires, save for these differences.

In the front porch are two massive pillars, without bases, upon which are sculptures after the fashion of those in the porch of the Durga temple at Aihole. One of them represents a warrior in his war chariot, drawing his bow against his enemies who crowd around him. Some of the many sculptures, upon the outside walls, show scenes from the Ramayana, many of which are labelled in characters which may be as old as the sixth century. The beams between the ceiling panels of the larger hall—for there are two halls—are most exquisitely carved and decorated in hanging arabesque, it being some of the richest work of its kind in Western India. A continuous frieze of little figures, bearing up the loops of a running festoon, such as is frequently seen in early Buddhist ornament, trails along the top of the walls of the hall.

As at Aihole, the village here is full of old temples, each one of which has some feature peculiar to itself, either in design or sculpture. In a Jain shrine, west of the village, are some very fine *makaras*, or conventional monsters, with florid tails of arabesque, and life-sized elephants flanking the shrine doorways.

In this corner of the Bijapur district are many other interesting remains, notably at Badami and Mahakutesvara. Badami was an early capital of the Chalukyan dynasty, when it was known under the name of Vatapi, the old form of its present name; indeed, it is safe to assume that it was in the hands of the Pallavas of the south before

it came into those of the Chalukyas. There is an inscription on one of the rocks here which mentions Vatapi and speaks of the Pallava as the foremost of kings. This inscription, judging by the script, is possibly earlier than that in Cave III., which is dated A.D. 578. The town occupies a very picturesque position between the horns of the rugged hills, which embrace it, with the pretty lake behind. The crags and boulders, covered with wild cactus and jungle—the ever-green tints contrasting with and enhancing the ruddy hues of the red sandstone—leave but a few boulder-strewn passages up through the gorges and rents, between the detached masses, to the ruined forts above. Perched upon an overhanging rock, on the north of the village, is the temple of Malegitti, or the female garland-maker. It is a small but compact temple, complete in all its parts, but now in disuse. It is in the same heavy style as those we have been considering. The name, as given in the inscription—Malegitti-Sivalaya—indicates clearly its original dedication. There is an inscription on one of the pillars of the porch of the time of the Vijayanagar king, Sadasivaraya, dated in A.D. 1543, which records the construction of a bastion, which is probably the one just above the temple. A similar inscription, of the same date, in Cave III., records the construction of a bastion on the southern fort, above the cave. Upon the hill, above the temple, is another in ruins, while, upon the farther margin of the lake, is the picturesque group of Bhutanatha of somewhat later date, making a very attractive picture with its reflections among the reeds of the lake. The temple and group of the Mahakutesvara shrines lie in a secluded glen, with its trickling water and screw pines, between Pattadakal and Badami, and are reached by a rough path across an intervening tableland.

LATER CHALUKYAN TEMPLES

BETWEEN the earlier and the later Chalukyan temples there appear to be no transitional examples to bridge over the gap, excepting, perhaps, Kallesvara at Kukkanur, and the old Jain temple at Lakkundi in the Dharwar district. About the middle of the eighth century the Rashtrakutas of the north, whom we have already seen cutting rock-temples at Elura, swept down upon the Chalukyas, took possession of their dominions, and held them until about A.D. 973, when a descendant of a side branch of the Chalukyan family regained possession of their ancestral lands. This may account for the absence of buildings during the period the country was in the hands of strangers. Not only in style is there a great difference between the earlier and the later work, but the material used has changed from the rougher grained sandstone to the more compact, tractable, and finer grained black stone known as chloritic schist, which dresses down to a much finer surface, and has enabled the sculptors to produce so much of that beautiful, delicate, lace-like tracery which characterises the later work, and which it would have been difficult to produce in the coarser material. With it the circular shafts of the pillars have been brought to a very high state of polish (Plate 27).

Lakkundi, the ancient Lokkigundi, now rather a deserted-looking village in the Dharwar district, full of the ruins of old temples enclosed within the old fort walls, was once a place of considerable importance. We learn that in A.D. 1191, the Hoysala king, Ballala II., made Lokkigundi his headquarters after finally extinguishing the Chalukyan family and annexing their territory to his own in the south.

The old Jain temple in the west end of the village is, probably, the oldest temple here. We have far fewer temple inscriptions to help us in dating these later temples, though the country is full of inscribed tablets recording miscellaneous grants. A grant to a temple

may not give us any clue to the date of its construction, yet we can gather from it the simple fact that the temple is not later than the inscription. This Jain temple is not far removed from the temple of Kallesvara at Kukkanur, which we may take as an intermediate example between the earlier and the later style. In both the size of the masonry has diminished, and we no longer find the heavy cyclopean blocks as used in the former. They are yet sufficiently heavy enough to be piled up without any cementing material, and, practically, no through or bond stones. In fact, all through the period of the older and medieval stone temples, here and elsewhere, no mortar or cementing material was used. The masons depended upon flat horizontal beds with the weight of the superstructure to retain all in place. When their buildings did give way, through unequal settlement of the foundations, or cracking of beams or supports, the masonry generally rolled down like a house of cards. Their foundations were poor, and of hardly any depth; many buildings were raised upon a layer of great undressed boulders spread upon the surface of the ground, and this not for want of funds, since they lavished an abundance of expensive decoration upon the superstructure (see Plate 22). Over most of the Dakhan the soil is firm, and the rock rises to or very near the surface. In Northern Gujarat, where the soil is very sandy, most of the more important stone temples rested upon a substantial brick foundation.

The dedicatory block, above the doorway, which has frequently been alluded to, is a small, square, projecting panel on the middle of the lintel, upon which is generally carved an image of the deity to whom the temple is dedicated, or of some member of his train; and, thus, should the image in the shrine be missing, it is not difficult to say what deity occupied it. An apparent exception to this rule is the image of Gaja-Lakshmi, or Lakshmi with her elephants, frequently found upon the outer doorways of Jain temples in the Chalukyan districts, but never upon the shrine doors. This, in the past, has led to many mistakes, for she is found upon the outer doors of nearly all Brahmanical temples in this district as well. Because she was seen in old photographs over Jain doorways, it was taken for granted

that all temples having her in the same position were Jain; but the great majority of temples in the Chalukyan country are Brahmanical. Lakshmi, here, was a favourite with both communities. Around the shrine walls of a temple are, usually, three principal images, one on each side and one at the back. The one at the back gives another clue to the original dedication of a temple, for it has some immediate connection with the image in the shrine. Jain shrines have, as a rule, less figure sculpture upon them, and what there is is a repetition of the Jina which is seated in the shrine. A Jain image always presides upon the dedicatory block over the shrine door of a Jain temple.

In Hindu temples the object of worship within the shrines of the Saiva or Lingait cults is the *linga*, or phallus, of Siva, except in temples to goddesses, which have an image of the appropriate deity. In Vaishnava temples there is installed an image of Vishnu or of some *avatara* or incarnation of him, as well as such allied deities as Surya-Narayana. In Jain shrines is always found an image of one of their twenty-four *jinās*, or *tirthankaras* (teachers), selected by the donor of the particular temple as his special favourite. These are either clothed or nude, according as the donor belonged to the *swetambara* (white robed) or *digambara* (nude, sky-clad) sect, and are found either sitting or standing with the arms hanging by the side in the latter case. The *digambara* images are nude to the waist, and in this particular they differ from Buddhist statues, which are shown with but one arm and shoulder bare, or fully clothed.

Passing on to the more elaborately decorated temples of the tenth to the thirteenth centuries, we may take that of Kasivisvesvara at Lakkundi as a fair example. Plate 22 shows the south side of the same. In this will be seen the storied arrangement of the tower, still discernible, though much masked by the superabundance of ornament; and it will also be seen how the vertical bands of the northern tower are simulated by the arrangement of the trefoil niches, ranged, in line, one above the other. As a purely decorative detail, the miniature *sikhara*, or tower, of the northern type is often introduced into niches around the temple walls. The rich lace-like work, for which these temples are noted, is seen in the mouldings around the doorways, much

of it being so thoroughly undercut as to have the appearance of the finest fretwork, standing away from the stone, and held to it by but a few tiny struts beneath (Plate 23). The village is full of these old shrines, which are, now, nearly all deserted or used for other purposes.

Even more elaborate is much of the carved work in the old temple of Mahadeva at Ittagi, 6 miles away across the border (Plate 25). This is a much larger building than that of Kasivisvesvara, it having what the other does not possess, a large open pillared hall. An inscription gives its date as *Saka* 1034 (A.D. 1112), and styles the temple a *devalana-chakravarti*, a very emperor among temples, a title it, no doubt, fully deserved, as being probably the finest temple in the Kanarese districts after that of Halabid in Maisur (Plate 24).

The tower, as it now stands, rises in three tiers, or stories, with a few of the lower courses of the masonry of the fourth which carried the finial. These stages are quite distinct, and are not so cut up and masked by decorative details as in Kasivisvesvara and others of the same class. The little cusped niches, which adorn the middle of each story, rising one above the other, are very handsome; and the delicate work is further enhanced by the rich dark shadows in the niches. Some eighteen to twenty-four inches of the basement is still covered up with the silt of ages, the lowest mouldings being hidden.

The triangular corner slabs of the central ceiling of the outer pillared hall are marvels of fretted stone (Plate 26). The great slabs have been worked into a rich heavy mass of hanging arabesque foliage and *makaras*, which emerge from the jaws of a *kirttimukha*, or grotesque face. The spirited convolutions of the design, with their circling excrescences and bewildering whorls, form, altogether, as rich a piece of work as will be found amongst these temples. What adds to the effect is the remarkably deep undercutting, so that the whole of this petrified mass of foliage hangs from the ceiling by a forest of little struts, hidden in the dark shadows behind it, and connecting it with the main body of the slab. Similar deep carving may be seen upon one of the Hoysala temples at Balagamve, just over the Maisur border (Plates 27 and 28).

The great open hall, at the east end, was originally supported upon sixty-eight pillars, of a totally different style from those of the earlier temples. By this time the masons had learnt something about the strength of materials, and that a much lighter pillar was sufficient. Twenty-six of these are large ones standing upon the floor and forming the main support of the roof; the rest, which were dwarf pillars, stood upon the surrounding bench, or *sedile*, and carried the sloping eaves. The larger columns are of different patterns, but are arranged symmetrically with regard to their designs. The four central ones are of the most complicated design, and are similar to those in the porch of the temple of Dodda Basappa at Dambal. There are also round and square shafted pillars as in Kasivisvesvara at Lakkundi, the round sections, as usual in this type of pillar, having been turned in the lathe. It must not be supposed that they were turned in a horizontal position, for that would have been impossible. They were turned in a vertical position, and the fixed tool was brought up against the roughly dressed shaft as it revolved. On many pillars the fine grooves of the sharp-pointed tool are left, but, in the more finished examples, the surface has been polished almost as smoothly as glass. This may be seen in the interior view of the temple at Annavatti on Plate 27.

Other highly decorated temples, of about the same period, are found in many places within the old Chalukyan boundaries, and there is hardly a village that has not some remains, either as the ruins of an ancient shrine or inscribed slabs. The more notable remains are found at Gadag, Haveri, Hangal, Bankapur, Kuruvatti, across the river, Dambal, Chaudadampur, Niralg, Harahalli, Galagnatha, Harihara, Rattihalli, Balagamve, across the border in Maisur, Unkal, Degamve, and Belgaum. The little temple of Sarasvati, the goddess of learning, at Gadag has some elaborately designed pillars, and there are no others that are equal to these for the crowded abundance of minute detail which covers their surfaces (Plate 31). It consists, chiefly, of repetitions of miniature shrines, tiny pilasters, panels containing Lilliputian deities and attendants, rampant lions, and a host of other detail. The little images are adorned with necklaces, bracelets, anklets, and a

profusion of other jewellery, each bead and jewel being fashioned with the most careful and delicate touch. Other pillars in this shrine are decorated with a beautiful diaper pattern around their shafts, of which there is just sufficient to make us wish for more. At Kuruvatti some of the flying figure brackets are still to be seen (Plate 29). These existed in most of the temples, but nearly all have been removed or destroyed. The evidences of the religious zeal of the iconoclasts of Islam are everywhere apparent among these shrines. At Dambal we come across a temple built upon a totally different plan from those generally met with—at least, so far as the exterior is concerned (Plate 30). The star-shaped plan, occasionally indulged in, was obtained by revolving a square about its centre—that is, the intersection of its diagonals. The angles of the square will thus travel round upon a circle, and, if the angles are stopped at points equidistant from one another, they will form the periphery of the plan of the proposed building, all the angles of which are right angles. The hall follows the same plan, though larger, the two giving an outline of a serrated 8. But, less frequently, temples have been found where the angles were not all right angles. A circular plan is not found, the nearest approach being a circular corridor, containing images, surrounding an ordinarily planned temple at the Marble Rocks, near Jabalpur. The Hangal temple is noted for its very large domical ceiling in the main hall, which rises, like some of those in North Gujarat, in concentric circles of cusped mouldings, and then, at the apex, falling again in a great rosette or pendant.

There is no part of Western India so full of inscribed tablets and memorial stones as the Karanese districts—that is, the country of the Chalukyas. There is scarcely a village that does not possess one or more; possessions that the people do not, in the least, appreciate, where they do not lend themselves to some base use as a culvert slab or a washing stone. Very few of these are now found standing upright in their original positions; for the most part they lie about half buried in the mud of fields; some are set up outside the village where the kine can have a last rub before being turned in at night. Many have perished. It is mainly from these lithic grants and deeds, often

demanding infinite patience in their decipherment, that the knowledge we have of the dynasties who, with their feudatory chiefs, ruled over these districts has been gleaned. These records are divided into two classes—those that record grants of land, money, or periodical payments in kind to temples, communities, or private persons; and those that are memorials of deceased persons. The former have little sculpture upon them beyond the sun and moon, indicating that the grant is to last as long as those two luminaries, and the *linga*, or other symbol, showing the religious sect to which the donor belonged, the remainder of the stone being occupied with laudatory accounts of the donor and his ancestors, the grant coming in as an afterthought at the end. The memorial stones are more elaborately sculptured in bands or panels, showing the manner of the hero's death, his ascent to the heaven of his god, and the symbols of his faith.

Other remains of those times are columns, which were, as a rule, set up before temples. There is one bearing a very important inscription at Mahakutesvara. A curious one stands in the village of Balagamve which has on the top a human statue with two birds' heads, known as *ganda-bherunda*, the great enemy of elephants, set up here to scare them away from the village crops. It is over 30 feet high, and was erected in A.D. 1047. Before Jain temples they held images, such as the *chaumukha*, and before Brahmanical shrines either images or a brazier for a light. Such columns were even copied in the monolithic temple of Kailasa at Elura, upon the top of which is the sacred *trisula*, an emblem of Siva.

TEMPLES IN NORTH KANARA

ALONG the seaboard, below the Ghats, in North Kanara, are found some stone temples of curious construction, but very much later than the Chalukyan, just described, having very little in common with that style. Although this district was within the old Chalukyan limits, comparatively little temple building in stone was carried out at that period. The method of building, above the Ghats, where the rainfall was very much less than in the Konkan, was not so suitable there, where it is excessive, for such buildings, without mortar joints, would be but sieves. It was left to the masons, under the Vijayanagar kings, to devise a method of roofing that would meet requirements. Similar buildings are also found in South Kanara at Mudabidri.

The most notable features in these temples, then, are the plain, sloping roofs of flat, overlapping slabs, and the peculiar arrangement of stone screens which enclose the sides. There is a great likeness between these and similar ones, built in wood for the most part, in Nepal, which has led some writers to wonder whether there could have been any connection between the two. Perhaps the only connection is that the same conditions produced the same result. These roofs may be seen repeated in the thatched cottages in Bhatkal, where such temples occur, even to the double story; and the like is seen in the Jami Masjid, a modern construction in wood, which is, perhaps, more like the Nepalese buildings than the stone temples. The barred screens, which enclose and protect the sides, have their prototype in the large coarse screens hung around the verandahs of the houses in the village, after the fashion of Venetian blinds, where they are made of battens or slats from the split stems of the *supari* palm, strung together with rope. They are very reminiscent of the Buddhist rail. There is nothing of much note within these temples—the sculpture is very coarse and the pillars are squat and ugly.

THE SOLANKI TEMPLES OF GUJARAT AND KATHIAWAD

RETURNING to Kathiawad and Northern Gujarat, we find a large class of medieval temples which are closely akin to those of the Chalukyan districts. After the fall of Valabhinagar, the ancient capital of the Valabhi kings, a new power arose in North Gujarat with Anhillavada-Pattana as its centre. The founder of this new dynasty was Wan Raj, of the Chavada family, whose members are reputed by some to have been Sun-worshippers. During the reign of one of his successors, bonds of matrimony joined up the families of Anhillavada and Kalyana, and a Solanki (Chalukya) became King of Anhillavada in the tenth century under the title of Mul Raj. With this chief's accession began the building of those temples, the ruins of which are now scattered about the country, and which reached its greatest height during the reign of Siddha Raj and Kumarapala during the eleventh and twelfth centuries. Indeed, Siddha Raj has been credited with so many buildings that, at the present day, if a villager be asked who the builder of any old ruin was, he promptly replies, "Siddha Raj." The descendants of the old *salats* still exist in this part of the country and follow their calling on the traditions of their forefathers, but in such modified style as less wealth and less zeal have developed. They still possess some of their old Sanskrit books, which they profess to follow, but it is doubtful whether many of them can understand them intelligently, since they are written in *slokas*, or verse, which are often obscure in their meaning. It was these men who were pressed into the service of the Muhammadans, when they gained the ascendancy in Gujarat, and who built the mosques and tombs of the conquerors; and this is the reason why we find these buildings so Hindu in feeling, the only limitation imposed being the rigid exclusion of figures upon their walls.

The largest and most elaborate temple of which we find remains in Gujarat was, no doubt, the Rudramala, at Siddhapur, the city called after Siddha Raj; of which just sufficient remains, together with the help of more fortunate examples, to enable us to reconstruct it with tolerable exactness. Siddhapur is upon the Sarasvati River, 64 miles north of Ahmadabad, and it was originally called Srithala, or Srithalaka. Mulraj, towards the end of his reign, about the middle of the tenth century, wandering about the country in search of ease for a troubled conscience, settled down at this holy place and commenced to build a temple to his gods, but he does not appear to have completed it. It was reserved for the great Siddharaj, two centuries later, to take in hand the unfinished and now ruined fane, and, in its place, to raise such a temple as had not been seen in the land before—the famous Rudramala (the garland of Rudra or of the eleven Rudras), or Rudramahalaya (the abode of Rudra or Siva), the scanty, but colossal, ruins of which now remain embedded amongst the houses of the town, near the river bank (Plate 32). These remains consist of five columns of the front or eastern porch, with their beams above them; four columns in two stories of the northern porch; four greater columns, also in two stories, which stood on the west side of the hall and before the shrine; and one *kirtistambha*, or arch of fame, the only one of a pair, in the courtyard at the north-east corner of the temple. In addition to these are fragments of some small subsidiary shrines at the back of the temple, which have been converted into a Muhammadan masjid.

It was with the help of a *salat* from Pattan that the writer was able to reconstruct the plan of this great building from the few portions left and an intimate knowledge of the style. It was, no doubt, the largest, or, at least, the second largest, in Gujarat, measuring about 145 feet by 103 feet, rising in, at least, three stories. Another temple, which stood at Vadnagar, 20 miles to the south-east, may have been still larger, judging from the size of two *kirtistambhas* now left, which are larger—35 feet 6 inches high—than that at this temple (Plate 41). Such magnificent piles were not likely to escape the attention of the Muhammadans in their first onslaughts upon Hinduism

in this province; and in proportion to their grandeur was the complete destruction that overwhelmed them. Between the front, or east, porch and the flight of steps, or *ghat*, leading down to the river, stood the Nandi pavilion, and, perhaps, before this again, a third *kirttistambha*.

These *kirttistambhas* were favourite additions to temples in this part of the country; they seem to serve no definite purpose other than ornament, but they serve that purpose well. There are, as a rule, three in connection with a temple, one flanking each of the forward corners of the building, and one in front of the entrance, facing the river, as in the present case, or the flight of steps leading down into an ornamental tank, as in the case of the temple of Surya at Mudhera. They are not, however, equally graceful in outline, those at Vадnagar being finer in every respect than the one at the Rudramala. It will be seen that they are simply composed of two columns, of a larger size, as we find in the halls of the temples, supporting a deep ornamental entablature and pediment. The squareness between the vertical columns and the straight soffit of the cross beam is broken by the light cusped *torana*, or flying arch, thrown across between them. This *torana*, again, as will be seen in the Abu temples, was also a pet device, whose convolutions are like some beautiful creeper running wild between pillar and pillar in cusps and curves. Where a *kirttistambha* is found singly beside an ornamental tank, as at Kapadvanj, it is, probably, the only remnant of an old temple which has disappeared. Among Chalukyan temples they are also found, but so much smaller and more insignificant that they hardly catch the attention. In the case of a number of these they served a special purpose, and were erected in the courtyards of temples where, in olden times, a great pair of scales was slung to the cross beam, on those rare occasions when a king, in fulfilment of a vow, had himself weighed against gold, which was distributed in charity.

A most imposing ruin is that of the temple of Surya at Mudhera, a village about 28 miles south by west from Siddhapur (Plates 38 and 39). Around the great temple of the Sun, which stands upon high ground and looks eastwards, over the village, to the rising sun, the ground shows signs, in extensive brick foundations, of a former

town of much more consequence than the present little mud-walled village. The temple, which is complete in all its parts, save for the tower and the roofs of the halls, which have disappeared, consists of the shrine and great closed hall, forming, together, one block, and the detached open pillared hall in advance of these. In continuation, eastwards, of the last is the ornamental *Surya kunda*, or tank, with the two pillars of a small *kirtistambha* between them, at the head of the steps leading down into the tank. Colonel Monier Williams, when Surveyor-General, visited this temple at the beginning of last century, and wrote of it: "There is one of the finest specimens of ancient Hindu architecture at Mundera I ever saw. It is a pagoda very similar in structure to those of the present day, but ornamented so profusely that it is very evident the founder was determined to make it the most finished piece of work that it was possible for the compass of human art to effect. . . . All the upper part of it is supported on pillars, which are of an order the most elegant, and enriched with carved work of exquisite beauty, and which would be considered in this refined age as the conception of a correct taste, and the execution of a masterly hand. . . . I do not recollect observing in any building that I have seen in India such marks of the sheer effects of time as many of the stones about this pagoda and tank display. We spent some time every day in inspecting the place; but such is the variety of its beauties that it would have taken a much longer time than we had to spare to have discerned them all, or have gained a faint idea of the general design."

The plan of Kumarapala's temple of Somanatha at Somanatha-Pattan is practically the same as this one, except that in the former there are no signs above ground of an outer pillared hall or tank. It is likely that, that temple being dedicated to Siva, these adjuncts of the Mudhera temple were replaced by the Nandi pavilion. The floor of the shrine has been destroyed—blown up by gunpowder, it is said, by the Muhammadans. Beneath the original floor is an underground shrine where, beneath the fallen débris from the tower and upper floor, was found the seat of the Sun god with his seven horses upon the front of it, but there was no trace of the image; that may be found

buried, upside down, in the pavement in front of some mosque. But Surya is displayed in all the prominent niches around the walls, and up and down the sides of the doorways. The shrine doorway has been badly damaged.

The pillars are of the same pattern as are found in the temple of Vimala Sha at Abu, with the graceful fretted *toranas* arching over the span from pillar to pillar, and softening the otherwise rigid effect of the straight square beam (Plate 40). The outside of the wall is a mass of delicate detail, all carried out in the red sandstone so universally used in this province. It is very doubtful whether marble would have had any better appearance, except for sheltered interiors such as at Abu; for where it has been used for exteriors, as in the old Jain temple at Sarotra in the north-west of the Pahlapur State, it has mostly weathered to a dirty-looking, smoky black which does not show the details to advantage.

The open hall is a magnificent pile of pillared splendour, even as it stands in ruins; and with these old temples it is questionable whether they looked better fresh from the builders' hands than they do now with all the mellowing effects of the ages that have passed over them, and when all the rawness of new masonry has vanished.

Anhillavada-Pattan, the old capital, has little to show in the way of architectural remains, the reason for which is that, being a large town, old material has been used up in later work, and we find many an old sculpture or pillar in the walls of the town. In the country around there are numbers of old ruins of interest which overflow into Kachh and the borders of Sind. Pattan became a quarry from which the kings of Ahmadabad and others carted away the material for building their own palaces, mosques, and reservoirs. This, in the old buildings, they got ready to hand, and, consequently, the only remains now of the Solankis and Waghelas are but fragments. The present town does not occupy the site of the old city, but is to the east of it. Outside the western gate, stretching far across the fields, are mounds, fallen walls, and other indications of the position of old Pattan. On this side is the ruin of the great Sahasara-linga *talav*, or tank, around which have gathered old legends of the time of Siddha-

raja. Most of the stone of its embankment has been taken away for building purposes. Near this are the remains of the Rani's *vav*, or well, and, judging from the portions that remain, it must have been second to none in Gujarat in size and splendour. Beyond this, on an island in the river, is Sheikh Farid's tomb, partly a converted temple; and, lying in the courtyard of the same, is a huge detached ceiling panel of magnificent winding foliage. This great scroll, executed, unfortunately, in friable sandstone, occupied the space in the ceiling over the east porch, which has fallen into the river, but it has been salvaged and placed in its present position. It is, certainly, the finest piece of scroll work yet found in Gujarat. A copy, on a much smaller scale, and not so delicately chiselled, is seen in one of the marble ceilings at Abu. In a Jain temple in the town is the reputed image of Wanraj, the founder of Pattan. There is some very fine work in marble in many of the Jaina temples, but it is not, as a rule, very old.

In the adjoining province of Kathiawad, and also in Kachh, are many more of these temples, built by the same men, under the same rulers and their tributaries, or local chiefs in the south with whom the Solankis were frequently at war. One of the most notable of these is the well-known and famous shrine of Somanatha at Somanatha-Pattan (Plate 33). The present ruin is a rebuilding by Kumarapala of that which was attacked by Mahmud of Ghazni in A.D. 1025. The temple was then desecrated, but was not destroyed; its destruction was carried out by the lieutenant whom he left behind him to govern the country. Bhimadeva of Anhillavada, who had been hovering about on the heels of Mahmud, appears to have retaken the town on his departure and to have rebuilt the shrine of Somanatha; and it was in consequence of it being again sacked, or of having fallen into ruin, that Kumarapala undertook its reconstruction. Subsequently, the building has been attacked on more than one occasion by the Muhammadans, and has been converted into a *masjid*, when two little *minars* were set up above the main entrance and a new dome was put over the main hall. It is now quite deserted, and near it lie scores of old images from its walls and collected from various old buildings in the town.

The plan of the temple probably followed that of the Rudramala at Siddhapur, and was of nearly the same dimensions, being in length some 140 feet over all. Though these two buildings were remarkable for their size, compared with others of the same class, they were by no means imposing when compared with sacred edifices in Europe. St. Paul's Cathedral could contain, comfortably, three such buildings within its walls. That there were larger temples than these in other parts of India may be gathered from the size of the shrine of a colossal temple—all that remains of it—at Bhojapur in the Bhopal territory, where the shrine door measures about 30 feet in height by 15 broad—or about three times the measurements of that of Somanatha.

The temple, which faces the east, consisted, when entire, of a large closed hall, with three entrances, each protected by a deep and lofty porch, and the shrine, which stood upon the west side of the hall, having a broad circumambulatory passage around it, between the inner and outer walls. This passage was lighted by a large balconied window in each of its three sides, and these formed a very pleasant feature in the general appearance of the building. It is quite possible that, like the temple of Surya at Mudhera, this had an open pillared hall in advance of the present main entrance, but there is no sign of it, now, above ground. Of the original pillars and pilasters in the hall, which are much like some of those in the temple of Tejahpala at Mount Abu (A.D. 1232), only a few now remain, and these are in a very bad state of decay owing to the corroding effect of the moist sea air and spray. The interior of the shrine has shared in the general wreckage, but retains most of its domical ceiling. The shrine door has been removed and has been replaced by a roughly built one.

The sculpture, upon the exterior of the temple, has been so effectually effaced by the despoiler that it is almost impossible to identify the few images that remain. The general workmanship shows it to be rather later than that of the best period—that is, the eleventh century, when the temples of Surya at Mudhera, Ambernatha near Kalyan, the Rudramala at Siddhapur, and Vimala Sha on Mount Abu were raised.

The well-known story in connection with the sack of Somanatha,

of Mahmud carrying away the gate or doors, is a myth, but may have some foundation in fact. It is almost certain that, if the doors had been overlaid with silver embossed work, as was a common practice, he stripped the silver off and appropriated it. The door brought back from Ghazni, with so much ostentation, and which is now at Agra, is an original door of Mahmud's tomb, the workmanship and proportions of which are not Hindu. Learning by bitter experience, at the hands of the Muhammadans, the Hindus, in their last rebuilding of the temple, in the town, constructed a subterranean shrine in which the *linga* was placed for safety, a hidden passage leading to it; another *linga* was placed in the shrine above for ordinary use.

The ruins of another fine temple of this class are found at Ghumli, in the Barda Hills, the seat of the Jethwas from the tenth to the fourteenth centuries (Plate 34). Though not so large as Somanatha, being less than two-thirds the length and breadth, it supplies some of the missing parts of that temple. The tower has mostly fallen, but there is sufficient left in the miniature *sikharas*, in the base of the tower, to show what the whole tower was like, both here and at Somanatha. A large, open, two-storied hall takes the place of the closed hall of Somanatha. This temple, known as Navalakha, may, possibly, be somewhat older than the other.

Of the same class, a very ornamental temple stands, in ruins, at Sejakpur, about 6 miles to the south-east of Dolia Railway Station (Plate 34). It, too, goes by the name of Navalakha, or nine lakhs—a favourite name for temples as well as palaces. It is not known what the "nine lakhs" refer to; it may possibly be intended to convey the idea that the building cost that amount of the current coin to build it, or that the number of images upon it were so many that they were past counting. It became but a high-sounding name for such buildings, like the thousand-pillared halls of Southern India, which never contained anything like that number.

Though the temple is in a very ruinous condition, the crispness of the carving upon it is almost as fresh and sharp as when it left the sculptor's hand; and, being in a reddish-yellow sandstone of uniform tint, the appearance of the work, under a brilliant sun, is very pleasing.

As usual, the plan of the building is designed with a number of projections and recesses, and these, again, are further nicked out into smaller ones in the basement mouldings, which is in striking contrast with the simple plans of the very early temples. Unlike the star-shaped plan of the Chalukyan district, this is worked out upon fixed squares. By dividing a square into 121 smaller ones, 11 on each side, and discarding 10 squares in each corner, by a zigzag line across the corner, the approximate shape of the periphery of the shrine or hall is obtained. The domical ceiling of the hall is constructed, not with regular radiating voussoirs, but with horizontal rings, with the individual stones lying upon flat beds, each ring being corbelled inwards above that below, until they meet near the crown, where the curve reverses in a central hanging rosette or pendant. The weight of the masonry of the roof, packed around the dome, holds the whole together without any cementing material. They are thus similar in construction to those in the Chalukyan temples of the same age. Two very fine examples are found in the temples of Vimala Sha and Tejahpala at Mount Abu. The pillars are of the same type as those at Mudhera, the dwarf ones around the margin having the conventional water-pot and foliage decoration so common throughout Gujarat and adjacent districts of that period. The filigree fretwork, covering the surface of the tower, is as rich as the best found elsewhere. The whole temple is built upon a high, solid, brick foundation.

Gujarat, Rajputana, and Kathiawad have been plentifully supplied with wells, many of which, especially the step-wells, are not much behind the temples in architectural pretensions. The descent to the water-level is by a series of flights of steps with landings at intervals, and a superstructure of pillars and architraves repeated in stories up to the ground-level. As the steps descend, these stories increase in number over the various landings. At the far end from the entrance is the deep, circular well, with an arrangement at the top, on the ground-level, for hoisting water for irrigation purposes. The advantage of the step-well over the ordinary kind is that the water can always be reached as it sinks from step to step: the disadvantage is that, being so accessible, it is easily fouled. There is a fine example

at Ahmadabad, known as Dada Harir's, and an even finer one at Adalaj, north of that place, and Wadhwan possesses two good ones.

Much attention was paid to the architectural appearance of city walls and gates. Most old towns of any consequence were provided with these, properly built in stone, in contrast to the mud walls of ordinary villages. Among the most entire, still existing, are those of Dabhoi, near Baroda (Plate 32). The walls are built of great blocks of sandstone with heavy bastions at intervals, in which will frequently be seen odd stones and sculptures from older ruined temples. Of the gates, by far the finest is the Eastern, or Hira, Gate (Gate of Diamonds). It was covered with handsome carvings representing groups of warriors, animals, birds, and serpents, some of which remain; but the gate has been, for the most part, rebuilt in Muhammadan style. Upon this gate is a representation of a camel, an animal not found in earlier sculptures.

From this account of the old architectural monuments of Western India we cannot omit mention of the Jain temples on Mount Satrunjaya in the south-east corner of Kathiawad, though, with the exception of one or two, the buildings cannot be classed as ancient or even medieval. But Satrunjaya is a place apart from all others, its position being unique. Rising gently from the plain to twin summits, 2,000 feet above sea-level, linked together by a saddle, or shallow valley, its top is crowded with hundreds of temples, all walled in, in separate enclosures, with a total absence of dwellings of any kind (Plate 42). The shrine of Adinatha dominates the southern summit, while a great chaumukha temple surmounts the northern. This is one of the five great *tirthas* of the Jains, the others being Samet Sikhara, or Mount Parsvanatha, in Bihar, Mount Arbuda, or Abu, in Sirohi, Girnar in Kathiawad, and Chandragiri in the Himalayas. This hill is sacred to Adinatha, or Adishvara Bhagavan, the first of the twenty-four *tirthankaras*, or great teachers, who were born into the world, at different periods, to reform it, after it had fallen from grace. Although great antiquity is claimed for many of the shrines, more especially for that of Adishvara, the rebuilding and repairing of the older ones have left but little, if anything, of the original work in

evidence anywhere. Inscriptions and mutilated images and *simhasanas*, or image seats, built in, in fragments, in modern cells and shrines, do not go back beyond the twelfth century. Among the oldest temples may be reckoned the Panch Pandava, and, perhaps, that ascribed to Kumarapala in the Vimalavasi *tuk*, or enclosure. The rest are later erections, and the building of shrines still goes on apace, since the building of a temple or the setting up of an image ensures to the donor a percentage of the merit that accrues to those who worship, merit being the royal road to salvation, or *nirvana*.

Forbes, in his "Ras Mala," describing Mount Satrunjaya, writes: "There is hardly a city in India, through its length and breadth, from the river of Sindh to the sacred Ganges, from Himala's diadem of ice peaks, to the throne of his virgin daughter, Roodra's destined bride, that has not supplied at one time or other contributions of wealth to the edifices which crown the hill of Paleetana; street after street, and square after square, extend these shrines of the Jain faith, with their stately enclosures, half palace, half fortress, raised, in marble magnificence upon the lonely and majestic mountain, and like the mansions of another world, far removed in upper air from the ordinary tread of mortals. In the dark recesses of each temple one image or more of Adeenath, of Ujeet, or of some other of the *tirthankaras* is seated, whose alabaster features, wearing an expression of listless repose, are rendered dimly visible by the faint light shed from silver lamps; incense perfumes the air, and barefooted with noiseless tread, upon the polished floors, the female votaries, glittering in scarlet and gold, move round and round in circles, chanting forth their monotonous, but not unmelodious, hymns. Shutroonjye indeed might fitly represent one of the fancied hills of Eastern romance, the inhabitants of which have been instantaneously changed into marble, but which fay hands are ever employed upon, burning perfumes, and keeping all clean and brilliant, while fay voices haunt the air in these voluptuous praises of the Devs." Satrunjaya has a *mahatmya*, or legend, supposed to have been composed by Danesvara at Valabhi, by command of Siladitya, King of Surashtra, extending to about 8,700 lines in Sanskrit verse, and containing 108 names for the hill.

The Jain shrines upon Mount Abu, an isolated hill within the southern confines of Rajputana, are better known to tourists than those upon Satrunjaya, being more accessible. But, here, only a small portion of the top of the hill is occupied by them, the rest being partly occupied by bungalows and barracks, perched among the crags and boulders, as a hot weather resort. The plateau extends some 14 miles from north to south, while its breadth varies from 2 to 4 miles. A hundred years ago, Colonel Tod was the first European to tread this delightful resort, 4,000 feet above sea-level, and to thread his way through the tangled lanes, hedged in with wild dog-rose, to look upon the lovely pink blossom of its wild peach-trees, and to gaze upon the fantastic forms of the Toad and the Nun Rock—the black-robed sister who is ever on her knees.

About a mile north of the civil station lie the Dilvada temples, which take their name from the adjacent village, and the village from the temples—Devalvada, or Temple-hamlet. Another 7 miles north is Guru Sikhara, the highest point, rising to 5,653 feet, and, about 4 miles north-east of the station, is the old fort of the Paramara chiefs of Abu, Achilgarh, beneath whose shattered battlements is the famous shrine and sacred tank of Achalesvara. The Dilvada group consists of four principal temples, each, with its subsidiary shrines and corridors, contained within its own enclosed quadrangle, as is the usual arrangement with the Jains. The principal temples are those of Vimala Sha and Tejahpala, whose marble halls were added about A.D. 1032 and 1232 respectively (Plates 35-37 and 42). They are constructed, almost entirely, of white marble, quarried in the plains to the north, and hauled up miles of rugged hillside by some means that we are now altogether ignorant of. Age and the weather have exercised their mellowing influence upon the stone under cover, giving it a soft, creamy tint which is very pleasing.

The amount of beautiful ornamental detail spread over these temples in the minutely carved decoration of ceilings, pillars, doorways, panels, and niches is simply marvellous; the crisp, thin, translucent, shell-like treatment of the marble surpasses anything seen elsewhere, and some of the designs are veritable dreams of beauty. The

work is so delicate that ordinary chiselling would have been disastrous. It is said that much of it was produced by scraping the marble away, and that the masons were paid by the amount of marble dust so removed. Amongst all this display of the sculptors' skill, the two great domical ceilings of the halls of Vimala Sha and Tejahpala attract most notice, and receive most praise. That of Vimala Sha is carried out in the same style as those in other temples of the same period, that in Tejahpala's is even more elaborate, the great central pendant being a magnificent piece of work. How the weight of this hanging mass of fretted marble is supported is a mystery. In the older temple, that of Vimala Sha, the pillars of the hall are of the same type as those in the halls of the temple of Surya at Mudhera and that of Ambarnatha, and are all of a uniform pattern; but in the temple of Tejahpala the architects had lost the early vigour of well established forms, and had allowed themselves a freer fancy in rather nondescript and whimsical designs. The general plan of this temple has been copied from the older one.

Though the detail work of these temples is exquisite, and the designs are not only novel in their treatment but extremely pleasing to the eye, yet the setting of the work is at fault. The general outlines of the buildings are not in the best proportions. Such large domes are set too squat; they require greater height. The corridor ceilings, especially, are much too low, and the unnecessarily heavy, massive beams, which separate them, are the antithesis of the fairy lightness of the sculpture and gossamer tracery. The latter is literally boxed up in deep compartments. As it is but a few feet above one's head, it is hardly possible to see more than one bay at a time, and only by straining the neck to view it. Had half the depth of the beams been buried in the masonry of the roof, and the bald squareness of their soffits been chamfered, the effect would have been improved, and the panels and beams would have merged into one general ceiling.

In Jain temples there is a great sameness in the images, especially of the *tirthankaras*. They are all of one pattern and one stereotyped cast of features, and it is only by their symbols, or *chihna*, shown beneath them, that we know the one from the other. Parsvanatha,

alone, differs from the rest in that he always has the serpent's multi-cephalous hood above him. The long ranges of corridor cell-shrines, which surround the court of the temple, form galleries of sculpture where the statues are all replicas of one another. Goggle eyes peer out at one from every cell, in a stony vacant stare, from images that ever sit in a calm and listless repose. Badly proportioned, straight-limbed, and muscleless, they are but poor attempts to delineate the human form. All Hindu and other Jain statuary, of this period, is, as a rule, more or less characterised by these faults, and the figures are often found in the most strained and unnatural attitudes. The difference between male and female is indicated, chiefly, by the magnified hips and breasts of the latter, the dressing of the hair occasionally helping to distinguish them. This is the more remarkable since the sculptors reduced their drapery to a minimum, apparently with the express purpose of displaying the limbs the better.

These two temples were each, originally, a small black stone shrine, to which the marble halls and corridors were added, and were, no doubt, in existence long before Vimala Sha's time. The present image of Rishabhadeva, in the main shrine of Vimala Sha, is not the original one, but is the second, or, perhaps, the third, in succession. The earlier image or images were smashed by the Muhammadans, and the curly-haired head of a colossal Jina, in black stone, was found lying in an underground room under the south corridor. Going the round of the corridor cells, it is found that nearly all the projecting mouldings of the image seats have been broken away in the middle by the falling of the images when thrown down. Many, in these cells, are not the original ones, which were destroyed; the old inscriptions upon the seats record the setting up of different *tirthankaras* from those now occupying them, as may be seen by their *chihnas*. There is a story of one of the sultans of Mandu having made the people eat their images by converting them into lime, the *pan-supari*, in India, being always eaten with lime.

Jain temples are, generally, well supplied with inscriptions, and these show that, in Vimala Sha's temple, the building of the corridor does not appear to be quite coeval with the building of the great hall.

In the cells the earliest date is 1063, and there is only one of that date. The next one is of 1144, one of 1145, five of 1146, two of 1150, six of 1156, one of 1170, and one of 1181. Soon after this last date there would appear to have been special activity in the setting up of corridor images, for there are twenty-five inscriptions dated in 1189, seven of which are over doorways. North Gujarat and Rajputana were overrun by Mahmud of Ghazni, the idol-breaker, in his march upon Somanatha, *via* Ajmir and Anhillavada-Pattan; it is more than likely that his troopers discovered the shrines of Abu, and wreaked their vengeance upon them. So we find Vimala Sha, of Pattan, in 1032, restoring and improving the shrines of his fathers. Later on, again, North Gujarat was invaded by the Muhammadans, still as keen as ever upon their favourite pastime of idol smashing, under Qutb-ud-din and Muhammad Ghori in 1194 and 1195, and no images were set up during those troublous times. In 1216 and 1217 some grants were made to the temple, and two inscribed stones were set up to record it; but it was not until more peaceful times returned, and the tide of Muhammadan invasion had again receded, that, in 1232, the rich banker brothers, Tejahpala and Vastupala of Anhillavada, turned their attention to the desecrated shrines, and, copying Vimala Sha's work to a great extent, added the beautiful marble halls and corridors to the old shrine of Neminatha. Other temples of less pretentious workmanship were added in later times to form the present group. Earthquakes, such as occurred in 1825, 1849 or 1850, and 1875, have, no doubt, with previous ones not recorded, been responsible for a great deal of damage, especially to beams and pillars. An inscription upon an iron pillar, at the temple of Achilesvara, records the utter rout of a Muhammadan attacking party by a swarm of bees that chased them down the hill.

Another Jain *tirtha* is Taranga, about 26 miles to the east-north-east of Siddhapur, which is a celebrated place of pilgrimage. It is situated in a wild and picturesque spot high up in the hills. After a long and weary ascent, on the western side of the range, through deep, sloping sand, where for two steps gained one is lost, and up a lovely glen shaded with great trees, down which ripples a stream of clear, cool water, the pathway leads to a great gateway at the crest of the hill.

The way then winds, by a very gentle descent, into a great natural amphitheatre in the hills, in the arena of which, surrounded by an extensive courtyard, stands the temple of Ajitnatha, built by Kumara-pala (1143-1174). On several of the higher peaks around are perched little canopies, like little watch-towers. The temple is one of the largest Jain temples in Gujarat. On one of the doorposts an inscription records the visit of Akbar and the names of those who entertained him.

TEMPLES IN THE DAKHAN

BETWEEN the Solanki temples in the north and the Chalukyan in the south are the so-called "Hemadpanti" temples which, though not so numerous or handsome, yet cover quite as much, if not more, ground. There is really no definite boundary, nor is the class itself very different from its northern or southern neighbours, with whom they are contemporaneous. They were mostly erected during the reigns of the Yadava chiefs and local governors under them in that part of the country between the Narmada and Krishna Rivers. The Rashtrakutas, who preceded the Yadavas, busied themselves more in cave cutting than in temple building, and we possess nothing in the structural line that we can definitely ascribe to their period of rule. Indeed, these "Hemadpanti" temples have no tradition and very few inscriptions to connect them with any particular reign. Hemadpant, or Hemadri, was the famous minister of the Yadava king, Ramchandradeva, about the second half of the thirteenth century, who, in his leisure, found time to compose several literary works and to build many temples, which tradition numbers at some three hundred. Having been in a position to command the requisite funds it is probable that, like the brothers Tejahpala and Vastupala of Gujarat, he caused numbers of temples to be built, and started a revival in building which was followed by others. The earlier or more decorated temples in the Dakhan, however, were built long before his time, but the villagers, in their ignorance, ascribe all old temples to him. The true "Hemadpanti" temples are characterised by heaviness, inclining to clumsiness, with severely plain exteriors. Very few temples of this class exhibited image sculptures on the outside walls, which would have invited the attention of Muhammadan iconoclasts, who were at this time making their presence felt in other parts of the country.

The earlier buildings are now in a very shaky condition, and in

a more or less dilapidated state, chiefly due to the material used in their construction—the amygdaloidal trap of the country, quarried, as a rule, upon the spot. Though a hard, tough stone, it is full of flaws and minute cracks, which render it very unsuitable for such parts as beams supporting heavy masses of masonry. Inadequate foundations helped to bring about disaster. For reasons of economy or lightness brick has now and then been used for the towers and superstructure above the cornice, which, when plastered and moulded, and discoloured by age, can hardly be distinguished from the stonework below. The stone walls, which were of variable thickness, and far heavier than would be built at present, were run up in two shells—an outer and an inner—the space between being filled up with loose boulders or dry rubble. There is a conspicuous absence of “through” or bonding stones or clamps, and no cement or mortar was used. Thus, in many cases, where the outer shell has fallen away, the inner has remained standing intact and supporting the superstructure.

The plans of these temples are either rectangular or star-shaped in their general outline, and revel in a great multiplicity of angles, which are carried up through the walls and the towers. These, again, are cut up by numerous horizontal mouldings into a bewildering mass of projections and recesses, with their sparkling lights and deep shadows. The star-shaped plan is not so common as the others.

The temple of Ambarnatha, though not in the Dakhan, strictly speaking, is, from its solitary position, more conveniently taken with the Dakhan temple group. The little village of Ambarnatha is situated about 4 miles south-east of Kalyan, the junction of the north-eastern and south-eastern branches of the railway near Bombay. Beside a small stream, to the east of the village, stands the venerable pile of the ruined temple of Ambarnatha (Plate 43). It is built in black stone, and is now in disuse, save for the attention of a solitary *pujari* who, once or twice daily, strews flowers upon the deserted *linga*. Upon a beam over the north door, inside, is an inscription which tells us that in *Saka* 982 (A.D. 1060) this temple was built (possibly upon the site of an older one) during the reign of the Silahara chief Mummuni, or Mamvani. It is thus of the same age as

the temple of the Sun at Mudhera and that of Vimala Sha at Abu, and was just fresh from the builders' hands when William of Normandy set foot upon British soil. It measures 89 feet by $73\frac{1}{2}$ feet. It is closer, in style, to those of the same age in Gujarat than to those in the Dakhan above.

The building faces the west, and is made up of the sanctum and *mandapa*, or hall, the latter being provided with three entrances, each with its own porch. The central ceiling of the hall is supported by four pillars, and these, with six others in the three porches, are all the free standing ones found in the temple. These pillars, which are alike, are similar in style to those in Vimala Sha's temple at Abu. The general plan is peculiar, being, apparently, made up of two squares set diagonally to one another, touching corner to corner—the smaller being the shrine and the larger the hall; but, in reality, it is formed of two squares touching side to side, whose sides have been whittled down to narrow central panels by the deep recessing of the corners and by a line of angles running straight between the diminished sides.

The floor of the shrine is sunk below the outside ground-level, and some eight feet lower than that of the hall. It is approached by a flight of steps, space for which is obtained by sacrificing nearly the whole depth of the usual antechamber, thus bringing the shrine door considerably forward. There seems to be little doubt that the original shrine was on about the same level as the hall, but that the fall of the top of the tower crushed down through the floor and destroyed it. The temple of Surya at Mudhera, as we have seen, was also provided with an upper and a lower shrine, the upper one having been blown up by the Muhammadans. We have also noticed the sunk shrines of Pattan-Somanatha and Ahmadabad. The *linga*, in this lower shrine, is a projection, through the floor, of the natural rock, and, probably, for this reason was considered of more account than that which occupied the shrine above. A rock *linga*, like this, is found in the temple of Omkara at Mandhata, in the Narmada, in the Central Provinces.

The ceiling panels, within the hall, are very richly decorated in the prevalent style of the best work of the eleventh century. The

central dome, owing to its small size, the black stone, and the badly lighted interior, does not show to advantage. In these black stone temples, with closed halls, the interior decorations are hardly seen until one's eyes get accustomed to the gloom.

A noticeable feature in the basement mouldings, on the outside, is the torus or half round moulding as found in very old temples. It will hardly be found again in later work, where it changes to a knife-edged moulding, somewhat wedge-shaped in section, as in the temples at Balsane in Khandesh.

The Mummuni of the inscription was one of the Silahara *mahamandalasvaras* of the Northern Konkan, whose capital was at Puri, which was, possibly, situated on Salsette Island. These Silaharas were tributary to the Rashtrakutas and the later Chalukyas of Kalyana in the Dakhan. Mummuni was thus, in all probability, a feudatory of the Chalukya king Somesvara I.

The finest group of temples in the Dakhan, but of later date than the last, is that of Gondesvara at Sinnar, 20 miles to the south of Nasik (Plate 44). The town, in old records, goes under the names of Sindinagara, Seunapura, and Sindinera. In A.D. 1025, Bhillama III., of the Yadava family, was ruling at his capital of Sindinagara as a feudatory of the Chalukyan king Jayasimha II. It is also recorded, in a grant of 1069, that Seunachandra I. founded the town of Seunapura. According to tradition, however, Sinnar was founded by a Gavali (Yadava) chief, Rao Shinguni, about seven or eight hundred years ago, and his son, Rao Govind, is supposed to have built the great temple of Gondesvara, or Govindesvara. It is possible it may have been named after Govindaraja, one of the Yadava princes, who ruled about the beginning of the twelfth century.

This temple is the largest and most complete in the Dakhan. It is a *panchayatana* group—that is, it consists of the central temple with four other small ones arranged as satellites around it, thus making the five that the name implies. The main temple, containing the *linga*, is dedicated to Siva, whereas the smaller ones probably contained images of Vishnu, Ganapati, Surya, and Parvati, the consort of Siva. Before the main entrance of the temple stands the Nandi

pavilion, in which is Siva's sacred bull, and, around the whole, was a wall, enclosing a great courtyard, with two entrance gates. It is all built of the amygdaloidal trap, most likely from the quarry, now filled with water, on the east side of the group. The masonry has, therefore, not weathered well, the disintegrating action of the wind and rain having left the exposed portions of the finer work rather honeycombed.

The plan and general arrangements are much the same as in the temple of Ambarnatha, the length over all being 78 feet. The style and disposition of the mouldings of the basement and walls are similar, except that the latter has a greater display of images, which, to a great extent, are here replaced by lozenge-shaped ornament. The figure sculpture is chiefly confined to small images around the porches, and these are very poorly carved; but there is a particularly fine piece of carving in the gargoyle through which the waste water from the shrine passes out on the north side. It is in the shape of the conventional *makara*, which is seen in the fine architrave over the shrine entrance in the little temple of Aesvara, to the north-west of the town. The tower and the roof of the hall are practically the same as in Ambarnatha, but more complete. The crowning member, however, as seen in the photograph, is not original; it is the villagers' idea of restoration—a Muhammadan dome on a Hindu temple.

The little temple of Aesvara is in the Chalukyan style, and so does not belong to the class of work found generally in the Dakhan, and it is the most northerly example of that class. There are some details that appear to have been borrowed from northern temples, such as the *kichaka*, or small squat bracket figure under, and supporting, the beams at the capitals of the pillars, which is not found in Chalukyan work. A very favourite Chalukyan ceiling is found here, representing the *ashtadikpalas*, or guardians of the eight points of the compass. Above the shrine door, which is fairly well decorated, is a line of images representing the *saptamatis*, or seven mothers, another sculpture peculiar to Chalukyan work, and on the dedicatory block above the doorway is found the Chalukyan Gaja-Lakshmi, instead of Ganapati, which is usual above Dakhan doorways.

A most superb piece of carving overarches the entrance to the antechamber, which, in three bands, rises from the jaws of two *makaras*, one on either side, with the most wonderful tails of flowing arabesque, which turn up over their backs, and forward, on to the arched bands. The central semicircular panel is occupied by a representation of Siva dancing the *tandava* (Plate 45).

The village of Balsane, in Khandesh, possesses a group of nine old temples of about the same date and style as that of Ambarnatha, but they are in ruins and uncared for save by the Archæological Department. In a field, just above the bank of the stream, are three. The largest one, which has three shrines around a common hall, is most elaborately and profusely sculptured, but has suffered badly from the weather (Plate 45). Parts of the *sikharas*, or towers, of two of the shrines remain, but that of the third has fallen. Triple-shrined temples are not uncommon, and are found, also, among Chalukyan and Solanki temples, but they do not always contain the same deities. What may be called the main shrine, that facing the west and the entrance to the temple, is dedicated to Siva, and contains his *linga* and bull. The other two shrines are now empty, but, judging from the images on the outside, the south one contained a Vaishnava image. The north one has two images of goddesses, so it is uncertain what the presiding deity was. The outer walls are more richly encrusted with ornamental detail even than those of Ambarnatha; in fact, we have here the style in its fullest development, crystallised into its richest details, and sparkling with light and shade from basement to summit.

On the east of the village is a temple with a single shrine and a hall with three porches, facing east. Like the last, it is in ruins, and the shrine has mostly disappeared; it can be seen that it was of the star-shaped plan, but the corners have sides at different angles with one another. Unlike the temple at Dambal, which has both shrine and hall on a star-shaped plan, it is confined in this to the shrine only.

With regard to the orientation of temples, it may be stated that Saiva shrines only face east or west, Vaishnava ones may also face the north, especially those to Krishna. Temples to Ganapati face the south, those to goddesses the north. Jain shrines are found in

all directions. Muhammadan mosques face the east—that is, the worshipper, with his face towards the *mihrab*, is facing Makka.

In the group to the east of the village of Balsane is one of a very different plan. Around the sides of the large closed hall is a series of ten small shrines in addition to the main shrine at the back. It is evidently a Vaishnava temple, the small shrines having contained images of the ten *avatars*, or incarnations, of Vishnu. In the main shrine, which probably held an image of Vishnu, is now placed the image of a horseman, which may possibly be that of the Kalki *avatara*, taken from one of the side shrines, and which escaped the profane hands of the idol-breakers.

Other old shrines are found scattered about through the Dakhan, both of the class we have just been considering as well as the later "Hemadpanti," especially at Pedgaon and Kokamthan in the Ahmadnagar district, Malsiras and Velapur in the Sholapur district, Anjaneri, Devalana, and Jhodga in the Nasik district, and at Vaghli and the deserted city of Patan in Khandesh.

MUHAMMADAN BUILDINGS

AHMADABAD AND GUJARAT

FOLLOWING close upon the period of the later medieval Hindu remains come the mosques, tombs, and palaces of the Muhammadans. The advent of the uncompromising followers of the Prophet checked the further development of temple building for a time, and what little was carried out, with very few exceptions, was in keeping with the chastened mood of the Hindu builders. Money spent upon raising such piles as those we have been considering would have been a risky investment, and the *salats* and builders of the temples found more certain employment in raising the mosques and tombs, palaces and public works of their new masters. On temples constructed under the new conditions the builders were careful to show as few images upon the outside as possible, so as not to excite the puritanical feelings of the idol-breakers. In addition to the secret underground shrines, in which they might hide their images, we find the Jains, at Satrunjaya, building miniature *idgahs*, or Muhammadan places for prayer, upon the roofs of their temples, knowing that the Muhammadans will not willingly destroy a mosque, or *idgah*, when once built, and the temple could not be demolished without the *idgah* being involved.

When the Muhammadans began to settle down in the districts they had raided, they made it an almost universal practice to build their first mosques out of the material of the demolished shrines, and often upon their very sites. In many cases they were content to adapt, with a few alterations and the mutilation of images, the temples as they stood, as was the case with the temple of Somanatha in Kathiawad, and the temple in the fort at Bankapur in the Dharwar district. In the latter, ignoring the shrine, they built a wall across the west side of the hall and converted it into a *masjid*. This was

the quickest and readiest way of meeting their immediate needs; and they followed this up with more pretentious buildings, such as the Jami Masjid, at Somanatha-Pattan, constructed wholly, or largely, out of temple materials, but on their own plans. The Hindus, unlike the Muhammadans, did not hold their own temple material too sacred to be used again for any other purpose. The Muhammadan, on the other hand, looks upon every stone of his mosque, even when the latter is totally ruined, as having been consecrated to God's use, and it is a desecration to use it in any other way. When several great slabs, bearing long Sanskrit inscriptions, were discovered built into the wall, with their faces inwards, in the mosque known as Raja Bhoja's school at Dhar, in Central India, though they allowed them to be replaced by others, they absolutely refused to let the old slabs leave the mosque, and so they have been framed and left there.

The principal centres of Muhammadan building activity in Western India, during the fifteenth, sixteenth, and seventeenth centuries, were Ahmadabad and its surrounding districts, Champanir, Broach, Cambay, Bijapur, and Sind; and there are many isolated notable buildings in other places. Those of Ahmadabad, North Gujarat, and Kathiawad were mostly erected during the period when the Ahmad Shahi family ruled this part of the country, after its first king had thrown off his allegiance to Delhi, and before Akbar again reconquered it—some hundred and sixty years. (Ahmadabad is said to have been founded by Ahmad Shah, the grandson of Muzaffar Shah, who had asserted his independence in A.D. 1412. During his reign were raised some of the finest buildings in the city—his own private mosque in the Bhadr, or citadel, the Jami Masjid, the people's mosque, Rani Sipri's mosque and tomb, Haibat Khan's mosque, Sayyid Alam's mosque, the Tin Darwaza, or triple gateway, which spans the principal street of the city, Sidi Sayyid's mosque, which has two noted windows, most superb specimens of the sculptor's art, and his own tomb, with that of his queens. In the suburbs was erected Malik Alam's mosque, about 2 miles to the south of the city.

Muhammad Shah, who succeeded him, in 1443, appears to have done very little during his short reign; Qutb Shah, however, added

to the embellishment of the city by building his own mosque in the Mirzapur quarter. During his time were completed the mosque and tomb of Sheikh Ahmad Khuttu Ganj Bakhsh at Sarkhej, the Kankaria tank, Dharya Khan's tomb, and the Batwa and Usmanpur mosques.

Mahmud Bigarah, following, in 1459, added many more buildings to the city during his long reign. He was the most famous of the kings of Ahmadabad, and it is said of him that "his personal strength, courage, and military skill are as conspicuous as his religious bigotry and his stern but far-sighted statesmanship. His love for architecture is attested by the cities of Mustafabad and Mahmudabad, near Kheda, as also by the numerous and elaborate additions which his nobles, following his taste, made to Ahmadabad and its environs." During his reign were built the mosque and tomb of Sayyid Usman, on the west bank of the Sabarmati, Miyan Khan Chisti's mosque, Muhafiz Khan's mosque, Achyut Bibi's mosque and tomb, Dastur Khan's mosque, Dada Harir's well, and the Shah Alam group, 3 miles to the south of the city.

Five other rulers succeeded Mahmud Bigarah until 1572, when Akbar reduced the province, and left a governor to carry on its affairs. The Marathas made their appearance about the beginning of the eighteenth century, and carried their plundering raids into Gujarat. The viceroys, much enfeebled by the absence of aid from either Delhi or surrounding chiefs, could not cope with these new enemies, and, "in A.D. 1755 the Muhammadan power in Gujarat was finally extinguished, and the Marathas, though divided among themselves, took their place. They burnt and plundered the property of friend and foe with almost equal energy and spared neither mosque nor temple which it suited them to destroy. Innumerable are the architectural monuments which have thus suffered from their wantonness and malice, and the interesting ruins of which the very materials have been carried away for building purposes. Ahmadabad, in particular, felt so heavily the effects of their internal feuds and grinding rule, combined with the natural decay of the Muhammadan population, that its suburbs almost disappeared, large quarters within the walls became desolate, many splendid buildings were destroyed. . . . Fortu-

nately the tide of anarchy was arrested ere it had wrought even more disastrous results by the supervision of the British power."

The earliest mosque in the city is that of Ahmad Shah in the Bhadr (*circa* A.D. 1414). The pillars, throughout the mosque, have been rifled from one or more Hindu temples, and on one of them is a *Devanagari* inscription dated *Samvat* 1307 (A.D. 1251). The façade of the mosque, with its archways, is purely in the Muhammadan style, which is very common among the earliest buildings; but some have no such façade, the pillared interior not being enclosed. Hindu temple pillars are not very lofty, their height generally being governed by the length of the stone blocks which it is possible to get from the quarries for the shafts, from the capital to the base, this part being always a single stone, and not built of two or more. Hence, the Muhammadans, finding them too low for their more lofty ideas, superimposed one upon the other in order to get the height necessary, and so we find them used in this mosque. The *minars*, at either end of the building, with staircases winding up through them to the various galleries encircling their shafts, are, of course, purely Muhammadan features, and were used as elevated positions from which the *muezzins* called the faithful to prayer. In this, as in many of the northern mosques, there is a raised and screened enclosure in the north end which was intended for women worshippers; and, to make it quite private, a separate entrance leads into it from the outside of the mosque. In the mosque of the Kaabah at Makka is a similar enclosure for the same purpose. Some mosques, such as the Jami Masjid at Mandu, in Central India, have an enclosure at both ends, in which case one is probably a dummy built to preserve the symmetry of the design of the building. The domical ceilings are richly carved and have, probably, like the pillars, been taken wholly from despoiled Hindu temples, any images upon them having been mutilated before being used in the mosque.

The essentials of a mosque are the *mihrab*, or direction niche, towards which the worshippers turn in prayer, so that they may be facing Makka; a pulpit from which the leader addresses the congregation; a covered apartment for shelter, and a small tank, or reservoir,

of water, or other means by which they can wash their feet before entering the body of the mosque. Other *desiderata* are minarets from which to call to prayer, a courtyard to enclose the mosque and separate it from outside dust and dirt, and certain sanitary arrangements, usually in one corner of the courtyard. The plan of a mosque is very simple. The building is a square or oblong hall, the roof of which is closed in with one or more domes supported by pillars or arches, and the wall round the three or four sides. In the back, or west wall, is one or more arched recesses, or *mihrabs*. When the front is enclosed by a wall, the latter is pierced by one or more arched openings, according to the size of the mosque, and the *mihrabs* in the back wall are generally opposite these openings. When minarets are added, they are either placed one on each side of the great central arch, or one at each extreme end of the façade. The dome, over the central bay of the mosque, is, as a rule, a very large one, while the others, if more than one, are smaller and lower. Visitors leave their shoes either outside the entrance to the courtyard or just inside the doorway. It is the neglect to do this that causes friction between European visitors and the mosque custodians. They may wear their hats all through the building, but not their shoes, which are likely to carry in some defilement upon them from the streets. The Hindu's objection to shoes in their temples is that they are of leather from the sacred cow. In many cases they object to a camera, even when used by a Hindu, because of its leather bellows and gelatine coated plates.

The largest and most important mosque in the city is the Jami, or public, mosque, the mosque of the assembly, or the Juma (Friday), as it is sometimes called, Friday being the Muhammadan Sabbath, when the people present themselves there for worship (Plate 47). Most of the other mosques in the city have been built by rulers or private individuals for the use of themselves and their families, and are often an accessory to the tomb of some member of the family. But many of these have, long ago, passed out of private hands into those of the local communities and are now, to all intents and purposes, public.

Fergusson wrote of this mosque: "Though not remarkable for its size, it is one of the most beautiful mosques in the East." With its

courtyard, it covers 382 feet by 228 feet, the prayer chamber being 210 feet by 95 feet. Within it are 252 pillars and 76 pilasters, supporting 15 domes symmetrically arranged, the centre 3 being somewhat larger, and considerably higher than the others. The very tall, graceful minarets, which flanked the great central arch of the façade, once famous as the "shaking minarets of Ahmadabad," were thrown down by the earthquake of 1819. In connection with these, it may be of interest to repeat a note from the writer's Progress Report for 1904-5: "The following extract from Grindlay's 'Scenery and Costumes and Architecture of Western India' refers to them: 'But the most remarkable circumstance attached to this building is the vibration which is produced in the minarets, or towers, rising from the centre of the building, by a slight exertion of force at the arch in the upper gallery. Many theories have been suggested to account for this, but they all fail in affording a satisfactory explanation of this architectural phenomenon; which is still further involved in doubt by the circumstance of one minaret partaking of the motion of the other, although there is no perceptible agitation of the part connecting the two on the roof of the building.' Colonel Monier-Williams, then Surveyor-General, gives, in his journal, the results of his personal observations on the subject: '31st May, 1809. We found on examination to-day that the minarets of the Jumma Musjid shook just as much, or even more, than any of the others, and that one communicated the motion to the other fully to as great a degree as those of the Bee-bee Sahib's. Indeed, we tried the experiment upon every perfect pair of stone minarets within and about the town, to-day, and the effect was just the same with them all. As the motion that one of them receives from the shaking of the other might be supposed to be communicated to the whole intermediate building, I lay down on the terrace roof, equidistant between the two minarets, while people were above shaking them; but I was not sensible of the smallest motion or agitation whatever in the building under me.'

"When at Ahmadabad, on the 31st May last, nearly a hundred years after Colonel Monier-Williams made his experiment, my attention was called to the fact that Siddi Basir's minarets, near the railway

station, possessed the same peculiarity. I ascended to the topmost balcony of one while two or three men ascended the other. Putting their hands together against their minaret they began to throw their weight upon it. For a few seconds I felt nothing on mine; but, as I was about to put the thing down to imagination, it began to swing with a soft, noiseless, and resilient motion, which gradually increased until I was, perforce, obliged to call out to them to stop it." All that remains of Sidi Basir's mosque are these two minarets and the arch masonry connecting them below.

The Jami Masjid was built by Ahmad Shah in 1423, as we are informed by an inscription above the central *mihrab*. Save for the pavement, which is constructed of a coarse kind of white marble, the whole building is of fine sandstone. The domes are of the usual Hindu style, richly carved in concentric circles. The forward central dome, just within the great arched entrance, rises to a height of 44 feet from the pavement, or floor, in three stories; flanking this, on either side, the next domes rise to 37 feet in two stories, while the domes in the ends of the building rise to 26 feet in a single story. The second and third stories admit light and air into the building between their pillars and through the interstices of the perforated screens. A little dome in the entrance porch to the *zanana* gallery has the unusual design of a spiral; it is met with, once or twice, in the Dilvada temples on Mount Abu. The pillars, though cut purposely for the mosque, have followed, in their general design, the stilted Hindu pillars in Ahmad Shah's mosque in the Bhadr; but their shafts, being unencumbered with the many mouldings and image niches upon the Hindu ones, are far more graceful. A purely Hindu feature, the *torana*, or flying arch, has been introduced, with much success, between the central pair of pillars in the entrance. A black marble slab seen in the pavement, in front of the entrance, and said to be the inverted part of a Jain image of Parsvanatha, reminds one of the similar use to which Mahmud of Ghazni put a fragment of the *linga* which he carried away from Somanatha-Pattan.

A door in the east colonnade of the courtyard leads into the court of the tomb of Ahmad Shah. This is a great domed mausoleum, in the

central hall of which are three richly carved tombstones, and at each corner of this hall is a smaller one, while the intermediate spaces are open pillared halls.

Beyond this, again, across a street, are the tombs of the queens, which, standing in the open air, are surrounded by a shallow pillared corridor (Plate 49). The tombstones fill the enclosed space and are elaborately carved in white and black marble with the remains of some fine inlay work of mother-of-pearl.

Sidi Sayyid's mosque, at the north-east corner of the Bhadr, is noted for the two magnificent perforated windows which it possesses (Plate 48). The actual perforated work measures 10 feet wide by $6\frac{1}{2}$ feet high, and is cut in fine sandstone, but is deserving of a better material. The windows are pointed lunettes, and, though the general appearance of both are alike, the designs differ. In the one, it is of a single tree whose pliant stem and many sinuous branches twine and intertwine among themselves. Rising up the middle is a palm whose stem is embraced by that of the other tree. In the other window there are three trees and four palms which go through similar convolutions. The windows are made up of four rows of thin slabs, set edge to edge, one on the top of the other. In this mosque we find the minarets placed at the extreme ends of the façade.

A mosque of distinction is that known as the Queen's, or Rani Rupwanti's, in the Mirzapur quarter (Plate 47). It is a very substantial building, heavily loaded with decorative detail, the bases of the fallen minarets, on the front of the mosque, being filled with exquisite designs in stone tracery. It measures 103 feet by 46 feet, and has three domes standing upon twelve pillars each. The building and tomb belonging to it are now in the hands of the butcher community.

Rani Sipari's, or Rani Asni's, mosque and tomb (A.D. 1574), near the Astodia gate, is "the most exquisite gem at Ahmadabad, both in plan and detail. It is without arches (except a small one over a side doorway) and every part is such as only a Hindu queen could order, and only Hindu artists could carve." It is one of the smallest in the city, measuring 48 feet by $19\frac{1}{2}$ feet. The balcony windows, in the

end, are elaborately wrought, and the *mihirabs* are of marble and carved with much care, though not so richly as in some of the other mosques. As it is so small, it would have been impossible to provide it with minarets containing staircases, so very slender solid ones were substituted, more after the prevailing style of those at Bijapur.

Muhafiz Khan's mosque, in the north of the city, though not a large building, is a well-proportioned one, and has its minarets intact. It was built, as its inscription tells us, by Jamal-ud-din Muhafiz Khan, governor of the city under Sultan Mahmud Bigarah, in A.D. 1492. It is distinguished for the exquisite character of its details; the galleries around the minarets, and the brackets which support them, display great richness of decoration. The carving is very Hindu in character, the under-cutting of the arabesque being so complete as almost to separate it from the block on which it is wrought. The *mihirabs* are about the finest in Ahmadabad, and are minutely and elaborately carved. The façade of the building has the minarets at the extreme ends, and has three small arched entrances instead of one large one.

There are many other first-class buildings, both in and around the city, but space will not permit us to take up more than these few specimens. Among the civil buildings may be mentioned the palace of Azam Khan, used as public offices, on the east side of the Bhadr. Not far from it, and spanning the principal street of the city, is the Tin Darwaza, or triple gateway, built by Ahmad Shah. The Moti Shahi Bagh, a palace built in the reign of Shah Jahan, and now the residence of the Commissioner, is a fine imposing building, built upon the high banks of the Sabarmati, about 3 miles north of the city. The Kankaria tank, south-east of the Rayapur gate of the city, is an ornamental expanse of water of no mean pretensions, entirely surrounded by tiers of cut-stone steps, and with an island and pavilion in the centre.

About 3 miles to the south of the city is the tomb and mosque of Shah Alam, which, with their subsidiary buildings, form quite an important group. This tomb is notable for the amount of perforated marble and brass screen work. The interior of the dome is inlaid with mother-of-pearl, and painted work adds to the general em-

bellishment. The minarets of the mosque are two of the loftiest in or around the city, and rather dwarf the main body of the building, which has an open façade of seven arches and six pillars. Though it may seem daring to say so, in the face of public opinion generally, I consider these minarets of Ahmadabad finer than those bald erections standing around the Taj Mahal at Agra; they are, probably, the finest in India.

At the village of Sarkhej, 5 miles to the south-west of Ahmadabad, is an important cluster of Muhammadan buildings of the fifteenth century, among which is the tomb of Sheikh Ahmad Khatu Ganj Bakhsh of Anhillavada-Pattan, which was built between 1445 and 1451. The tomb-chamber is enclosed by screens of perforated brass in beautiful patterns, and the exterior walls are filled with windows of perforated stone tracery. To light the interior of the dome, which, otherwise, would have been in perpetual gloom, the very unusual expedient has been resorted to of four tracery windows in the dome itself. Near by is the mosque, carried out entirely in the pillar and lintel style. Fergusson says: "This mosque is the perfection of elegant simplicity, and is an improvement on the plan of the Jami Masjid. Except the Moti Masjid at Agra, there is no mosque in India more remarkable for simple elegance than this."

Notwithstanding the elaborate work lavished upon these buildings, and the great variety of detail, they begin, to some extent, to weary the eye by their sameness of design. A mosque, with its rigid requirements to which the building must conform, does not lend itself well to any originality of design, so that we get a few stock plans which, in the main, are repeated over and over again. The design is too geometrically balanced about its centre—a complete plan to which nothing can be added and from which nothing can be taken away. There is no chance of stumbling upon some unexpected adjunct or pleasant variation: this is because they were built once for all, and did not grow gradually like the great cathedrals of Christendom.)

Another centre of old Muhammadan buildings is Champanir, or, properly, Mahmudabad, near that old Hindu site. It lies 30 miles north-east of Baroda, and about 72 miles to the south-east of Ahmad-

abad. The city was founded by Mahmud Bigarah of Ahmadabad, in A.D. 1484; but, beyond the mosques and tombs, there is little sign of its having been a city of any account. It began as a fortified camp when Mahmud, with his army, took up his position here until he reduced the old fort of Pavagadh, whose beetling cliffs and defiant towers overhang and dominate the place. The old Hindu town of Champanir, whose ruins lie at the foot of the fort, is said to have been founded by Champa, a merchant and companion of Wan Raj of Anhillapur-Pattan, and was also known as Champakadurga and Champa-kamera, which names, probably, referred more to the fort above. Ruins of small Hindu temples are found upon the site as well as on the fort. Mahmud's siege lasted, on and off, some twelve years before the fort fell into his hands, and even then it fell only by treachery. Therefore, in order to show the enemy that it was not his intention to abandon it, he started to build in sight of the fort a new city, which he called after himself; and this is not the only town of that name that he founded during his warlike excursions abroad. Scattered over the site, and shut in by the jungle that has overgrown the site, are a number of very fine mosques and tombs, all in a ruinous condition, save for the little attention the Archæological Department has been able to give them: the bat and the owl now hold their midnight court there.

The principal building is the Jami Masjid, which is one of the finest mosques in Gujarat. Here the minarets, which are fairly complete, rise from the centre of the façade, one on either side of the great arched entrance, as in the earlier examples in Ahmadabad. The mosque, within, measures 169 feet by 81 feet. The roof contains eleven large domes, the central one rising through three stories to a height of 57 feet above the floor. On the first and second floors a carved balcony runs round the octagon, under the dome, which is decorated by deep carved ribs, of which there are sixteen. There is some very beautifully carved work in the ceilings (Plate 49).

Among the many remains at Mahmudabad is a beautifully decorated small tomb, the dome of which has fallen. "The pilasters at the corners and jambs of the doorways are carved in patterns of the richest floral designs. Except the two famous windows in Sidi

Sayyid's mosque at Ahmadabad there is hardly anything elsewhere to match these twelve pillars in richness and variety of decoration." What adds to the beauty of the design is the plain flat surfaces, two upon each of its four walls, which serve as an admirable foil to the rich work around. Another mosque of note is the Nagina Masjid, which is upon the same general plan as that of the Jami Masjid. It has some fine carving, in panels, on the bases of the minarets. Out before it stands a pillared tomb, graceful but much ruined.

Mahmudabad-Champanir became the favourite residence of Mahmud Bigarah, and continued to be so for the rest of his days; and it is said to have been the political capital of Gujarat until the death of Bahadur Shah, in 1536.

Another Mahmudabad, or, as it is more generally spelt, Mehmudabad, founded by Mahmud Bigarah, lies about 17 miles south-east from Ahmadabad. He is said to have formed, beside it, a large deer park, at each corner of which he built a pleasure house with gilded walls and roof. About a mile and a half to the east of the town is the tomb of Mubarak Sayyid, one of Mahmud Bigarah's ministers, erected in 1484. It is a finely proportioned, massive building, though simple in its design. Of this building Fergusson writes: "The most beautiful, however, of these provincial examples is the tomb at Mahmudabad, of its class one of the most beautiful in India. . . . Though small—it is only 94 feet square, exclusive of the porch—there is a simplicity about its plan, a solidity and balance of parts in the design, which is not always found in these tombs, and has rarely, if ever, been surpassed in any tomb in India. The details, too, are all elegant and appropriate, so that it only wants somewhat increased dimensions to rank among the very first of its class. Its constructive arrangements, too, are so perfect that no alterations in them would have been required, if the scale had been very much increased."

Other centres of Muhammadan work in Gujarat are Cambay, Dholka, and Broach, at all of which places are buildings of considerable note.

ARCHITECTURAL REMAINS AT BIJAPUR

UPON the breaking up of the Bahmani Kingdom of the Dakhan, towards the end of the fifteenth century, the local governors of the provinces threw off their allegiance to their suzerain and set up petty kingdoms for themselves. One of these was Yusuf Khan, who was in charge of the Bijapur division, and who assumed independent power under the title of Yusuf Adil Shah, in 1489. He is said to have been a son of Murad, Sultan of Turkey, who, on the death of the latter, was smuggled out of the country by his mother, to escape the fate of younger sons on the death of a sultan. After many adventures he arrived at Bidar and took service under the Bahmani king, where he rose to high posts in the State, and was finally appointed to the governorship of Bijapur. Hence we find all the principal buildings in that city surmounted with the Crescent, the Turkish national symbol. He had been succeeded by eight rulers of the Adil Shahi dynasty, when Sikandar Adil Shah surrendered the city to Aurangzib, in 1686, and it became a district under Delhi. During its two hundred years of independence, which seems to have been made up mostly of troublous times—wars without and insurrections within—the city was enclosed with lofty masonry walls, some 7 miles in circumference, and was adorned with many beautiful buildings—mosques and tombs, palaces and reservoirs. In the middle of the city is the walled citadel, or arkill, within which were the king's palaces, courts, and assembly hall, the ruins of several of these buildings having been converted into dwellings and offices for the local authorities when Bijapur was made the headquarters of the Collectorate in supersession of Kaladgi. The walls of the Gagan, or assembly hall, still stand gaunt and bare with its great arch, 60 feet 9 inches in width, spanning the front, but the roof has gone. It was on the greensward, before this building, that tournaments, trials of strength, and military displays took place before the king and his nobles assembled in the Darbar

hall. Thus it was necessary that the façade arch should be of sufficient span to offer no obstruction to the view. Behind this is the Sat Manjli, or "Seven-Storied Palace," with a neat little water pavilion before it. Other buildings, which were converted, are the Adaulat Mahal, the Anand Mahal, the Arash Mahal—all now dwellings—and the Chini Mahal housing the general offices. The little Makka Masjid, built for the ladies of the court, is enclosed, as one would expect, by a lofty wall. It has no *mimbar*, or pulpit, since no man could enter to address them. The earliest mosque in Bijapur, that of Karim-ud-Din, built of materials from a desecrated Hindu temple, stands not far from the south-eastern gateway of the citadel.

Amongst those buildings which stand out most conspicuously in the city and its environs are the Jami Masjid, the earliest and most dignified building, the tomb and mosque of Ibrahim II., the most lavishly decorated, and the great Gol Gumbaz, or tomb of Sultan Muhammad, a contrast to the rest by its massiveness and simple exterior. The Jami Masjid is, as its name implies, the principal public mosque in the city, and, in it, we have the style, which is so peculiar to Bijapur, in its full development, in its purest and best form. It is evidently not the work of local builders, for there could have been no indigenous craftsmen, at that time, capable of attempting anything approaching it. Not only its style, but its architect and builders must have been imported; and their descendants, no doubt, raised the subsequent buildings in the city. No later building is equal to this for its perfect proportions or sublimity of effect.

The domes of Bijapur were built for external display: internally, they are lost in their own gloom, running up very high compared with their diameter, and, generally, having no clerestory lights to show them to advantage, some rising from the general roof-level, almost as hollow towers. These are unlike the domes of the Ahmadabad buildings, which are raised upon disengaged pillars, as a rule, with plenty of light and air entering them from open galleries around the springing levels. The obvious corrective for this is double doming, the inner, or lower, dome forming a ceiling sufficiently lighted from below. But this device is met with nowhere save in the Ibrahim

Rauza tomb, which, in this case, produces a second story entered by stairs through the thickness of the walls. But, as this is a flat ceiling, covered around the margins, it can hardly be called a dome.

The arches are, mostly, two-centered, the curves being carried up from the springing to a point whence they are continued as tangents to the crown. This is the prevailing form of arch, but others are in use, such as those in the tomb of Ali Adil Shah II., which are purely Gothic, the ogee arch, in one case the segmental, and an almost flat arch. They are often ornamented with richly moulded cusps, as in Ali Shahid Pir's mosque, where they look particularly well.

A prominent feature in the Bijapur buildings are the graceful minarets that flank the mosque façades, and, sometimes, rise above the tombs. These are purely ornamental, being too slender to contain a spiral staircase within them, as is the case with the Ahmadabad ones. The great clumsy brick and plaster minarets standing before the Makka Masjid have stairs winding up them, but they are parts of some very early mosque which has disappeared.

Except in the case of the two converted temples in the citadel and the guardroom at the gateway, there is no other example of the pillar and lintel style which is so common in Gujarat, and these are not finished specimens, but rough and ready conversions to serve the purpose of the first invaders, whose prolonged stay in the place was problematical. The mosque of Malik Karim-ud-Din is wholly made up of pillars, beams, cornices, and other portions from old, dismantled Hindu shrines, the porch being a part of a temple *in situ*—the hall, or *mandapa*, with its pillars and niches, but wanting its roof. The shrine, which was on the west of this, was cleared away to give through access to the mosque courtyard beyond it. Across the whole west side of the courtyard is the mosque, or prayer chamber, made up of pillars, of all patterns and heights, brought to one uniform level with odd blocks; and, over these, are laid cross beams and slabs forming the roof. Like the Ahmadabad mosques, the central portion of the roof of this one is raised by pillars placed one upon the other, thus admitting light and air into the body of the building. An inscription within tells us that Malik Karim-ud-Din erected the upper part of the mosque

in A.D. 1320, and a builder, Revoya, of Salhaodage, carried out the work. This Karim-ud-Din was the son of Malik Kafur, the general of Ala-ud-Din, who conducted several successful campaigns against the Hindu kingdoms of the south.

The great Jami Masjid, with its courtyard, embraced the largest area of any building in the city—about 91,000 square feet, which, with a later extension of the courtyard on the east, amounts to 116,000 feet in all (Plate 50). The main building, the mosque proper, stretches across the west side of the courtyard, and the latter is closed in, for the most part, with side arcades or corridors. Plate 50 gives a good idea of the interior of this noble building. The great dome, over the central bay, follows more, in its outline, the shape of western domes, being practically segmental. Most of those in Bijapur are bulbous, being curved in at the springing, a very good example of which, though not extreme, being that over the tomb of Ain-ul-Mulk, to the east of the town, and another is that of Khawas Khan, one of the "Two Sisters."

As may be seen in the photograph, the interior of the mosque, save the decorated *mihrab*, or prayer niche, is severely plain. There is an air of quiet simplicity about it which adds much to the impressive solemnity of the place. The whole front and recess of the *mihrab* is covered with rich gilding, whereon are representations of tombs and minarets, censers and chains, niches with books in them, and vases with flowers, while the whole is interspersed with bands and medallions bearing inscriptions. From these we learn that Malik Yaqut completed the mosque, or, in other words, put the finishing touch to it in these decorations, under the orders of Sultan Muhammad Adil Shah in A.H. 1045 (A.D. 1636). The mosque was commenced, however, by Ali Adil Shah I. (A.D. 1557-1580), and was, no doubt, practically completed by him. Sultan Muhammad was very partial to painted decoration, and he adorned the walls of the Asar Mahal, where the sacred relic of the Prophet is enshrined, and the little water pavilion at Kumatgi, 10 miles to the east of the city, with mural paintings, in which were introduced human figures and groups in defiance of the religious prohibition against it. He also gilded and

decorated the walls of the Sat Manjli, the palace of his favourite mistress, Rhumba. The fanatic Aurangzib, when he captured the city, had all these mutilated wherever the human form was portrayed. The floor of the Jami Masjid was divided by him into over 2,250 spaces, or pews as it were, by thin black lines upon the plastered and polished surface, each ample for a worshipper to kneel in when at prayer.

The Ibrahim Rauza, or tomb and mosque of King Ibrahim II., stands in the open, a short distance to the west of the city, beyond the Makka gate. Upon a high platform, within a great square enclosure, which was a royal garden at one time, are two imposing buildings facing one another, with a reservoir or fountain between them (Plates 51 and 52). The building standing upon the east side of the platform is the king's mausoleum, in which are also interred his queen, Taj Sultana, and four other members of his family, namely, his mother, two sons, and daughter Zorah, the men's tombs being distinguished by a long arched ridge-stone upon the top of the tombstone. The sepulchral chamber, which is 39 feet 10 inches square, contains the six tombs in a row, from east to west, each lying north and south. In the middle of each of the four sides of the room is a doorway, with richly carved wooden doors, whose ornamental iron bosses were once gilded, while extracts from the Quran, in raised Persian letters, fill the panels. On either side of each of these doors is a large fanlight-shaped window, they being beautiful specimens of perforated stone work. Each window is filled with interlaced Arabic letters, forming extracts from the Quran, the letters being so interwoven as to be difficult of decipherment by any but an expert. The lights are the perforated blank spaces dispersed between the letters. These remind one of the perforated windows in Sidi Sayyid's mosque at Ahmadabad, already described, the pattern of the latter being in tree forms instead of letters.

These windows, with their very small interstices, admit, with the doorways, when open, but a very subdued light into the chamber, just enough to reveal a most remarkable flat stone ceiling. Most of the buildings in Bijapur have something peculiar to themselves, either in

construction or decoration. This ceiling appears to have been the *chef d'œuvre* of the architect who designed this building. It is simply a hanging ceiling, with another room above it, under the great dome. The whole span is the breadth of the room, namely, 39 feet 10 inches, of which a margin 7 feet 7 inches broad, all around, curves upwards and inwards to a perfectly flat square in the centre, 24 feet square. Upon closely examining this, it is found to be composed of slabs of stone, like an inverted pavement, with, apparently, no support. There are, certainly, two deep ribs, running across each way, but these are purely decorative and are made up of separate stones, which do not, in any way, support the slabs in the nine bays into which they divide the ceiling. This has been a daring piece of work, carried out in defiance of all ordinary rules and regulations governing the construction of buildings. But the architect not only foresaw exactly what he wanted, and knew how to accomplish it, but he had the thorough confidence in his materials, in this case, chiefly, superb mortar, which caused him no hesitation. That it has stood to the present day, three hundred years, is sufficient answer to any carping critic. The buildings have deteriorated considerably externally, but this has been due, in great part, not to the want of skill on the part of the builders, but to the stone used. When the Dakhan was divided up into small States, as it was then, each jealous of the other, and more often at war than otherwise, suitable building material could only be sought for within the narrow limits of the State; the amygdaloidal trap of the Dakhan, found in this area, was far from being the best that could be desired, with its many flaws and cracks, some so fine as hardly to be noticed when freshly quarried, but which in time worked mischief. Hence the deplorable condition of the brackets and slabs of some of the fine cornices, notably that of the great Gol Gumbaz, to repair which our Public Works Department had to go further afield in search of better material.

The whole secret of the durability of the masonry of those days lay in the great strength and tenacity of the mortar, and this those builders knew how to make. Perhaps, too, there were fewer contractors or middlemen. This, then, is the secret of this ceiling: it is,

in fact, a solid concrete ceiling to which the stone slabs are merely stuck by its own adhesiveness. Partly destroyed domes, constructed in this manner, may be seen with their lining of stone slabs still adhering. There was, of course, the danger of individual stones falling out, but this was provided against by rabbetting the edges, and, in some cases, fastening adjacent stones with iron clamps. The ceilings of the corridors are constructed in the same way.

Around the sepulchral chamber, outside, runs a mezzanine gallery supported, outwardly, upon pillars which are very Hindu-like in style. The exterior walls of the chamber, between and above the windows and doors, are elaborately decorated with shallow surface tracery in stone of arabesque and beautifully interlaced verses from the Quran. The effect had been further enhanced by colour and gilding, which has weathered badly (Plate 52). An inscription on one of the doorways says:

"Heaven stood astonished at the elevation of this building, and it might be said, when its head rose from the earth, that another heaven was erected. The garden of Paradise has borrowed its beauty from this garden, and every column here is graceful as the cyprus tree in the garden of purity. An angel from heaven announced the date of the structure by saying, 'This building, which makes the heart glad, is the memorial of Taj Sultana.'"

The last sentence gives the date A.H. 1036 (A.D. 1626). From the inscription it would appear that the mausoleum was built as Taj Sultana's tomb, but Ibrahim, dying before her, was buried in it.

Both the tomb and the mosque opposite are noted for their deep rich cornices and graceful minarets, which, as we have already seen, are purely decorative. The amount of labour expended upon these features has been unstinted. Under the cornice of the mosque may be seen, hanging, the remnants of heavy chains with pendants, each of which has been carved out of a single block of stone. Some beautiful specimens of these may be seen at the tomb of a saint at Rauza, near Aurangabad, and also on the Kala Masjid at Lakshmesvara, in the Dharwar district, where they are still made. The perforated parapets, round the skyline of the buildings, look, from a distance, like a fringe of petrified lace, and the grouping of the miniature *minars*, round the bases of the corner minarets, is very pleasing. An inscription, near

the south door of the tomb, tells us that Malik Sandal, Bijapur's most noted architect, expended 150,000 *huns* on the building. Carried out, on the same lines of construction and decoration, are several other buildings in the city, amongst them being the beautiful little mosque of Jahan Begam, with its well-proportioned cornice, rich façade, and graceful minarets, said to have been built by Ibrahim II. in honour of his daughter, whose name it bears; and the Mehtar-i-Mahal with its elegant balconied windows supported upon delicately carved stone brackets which look more like fine wood-work (Plate 53).

In marked contrast to the buildings just noticed is the great Gol Gumbaz at the other end of the town. Ibrahim II. had carried his decorative style to its utmost limits, and had thus left to his son, Muhammad, no chance of surpassing him in the same line. Since the Ibrahim Rauza represented the last word in decorated effort and graceful effeminacy in stone, he resolved to strike out in a more virile and broad-shouldered style, which would, by mere mass, overwhelm the work of his father. How far he succeeded may be gathered from a reference to the photograph of his own mausoleum (Plate 54). No doubt there was great rivalry in the building of the royal tombs, and Ali II., his successor, started his own tomb upon so ambitious a scale that he died before he had done more than raise the arcade of Gothic arches which were to have surrounded the death chamber. Sultan Muhammad certainly succeeded in raising the most conspicuous mass of masonry in the Dakhan: indeed, one of the greatest in the world.

The general contour of the building follows that of a great cube surmounted by a huge hemispherical dome, with an octagonal tower running up each of its four corners, crowned by a smaller dome. Between these towers the only prominent feature upon the face of the building is the great, deep, overhanging stone cornice, the rest of the masonry, except for the door and window-frames, being rubble and plaster. The comparatively small doorways and windows, dwarfed by the immense expanse of wall surface around them, by no means assert themselves, and, from a short distance, are hardly noticeable. The monotony of the plastered masonry of the four sides is relieved by the corner towers, which are riddled from base to summit with arched

openings, pigeon-hole fashion—seven in each of the seven stories into which the towers are divided.

The interior of the building is very impressive. Upon entering this vast chamber, which is 135 feet 5 inches square, rising to the apex of the dome, 178 feet overhead, the visitor's ears are assailed, on all sides, by uncanny sounds and echoes which, rebounding from wall to wall, roll round the great dome, whence they are returned in a multiplicity of weird reverberations. Through the gloom, 109 feet above the floor, a gallery may be seen, looking more like a cornice, running round the base of the dome. In reality, the gallery hangs out 11 feet from the walls, and is reached by long, spiral stairs, in each corner of the building, which, also, give access, as they ascend, to each story of the towers. The uninterrupted floor space is the greatest area of any single apartment known among ancient buildings, measuring 18,337 square feet. The interior diameter of the dome is 124 feet 6 inches, while its exterior measurement is 144 feet. The total height, outside, above the platform upon which it stands, is 198 feet 6 inches, exclusive of the pole at the top, which originally carried the metal finial, and would add another 8 feet to the total.

Upon a high platform, in the centre of the chamber, are the tombstones, but not the graves, of the grandson of Muhammad; his younger wife, Arus Bibi; the Sultan himself; his favourite mistress, Rhumba; his daughter; and his older wife, in this order from east to west. The real graves, where the bodies lie, are, as is usual, in the vault immediately below these, the entrance to which is by a stair under the western entrance. Over Muhammad's tomb is erected a wooden canopy.

The method, used so successfully at Bijapur, of working up to the dome from the sides of the square room below, by means of pendentives, or squinches, in the corners, is here seen at its best. Theoretically, there is no limit to the size of the building that could be raised or covered on this principle; but, with the material the Bijapur builders had to deal with, it is very doubtful whether they could have exceeded the dimensions reached in this case without great risk of accident. The building being planted upon virgin rock, they

had no trouble with the foundations. The dome, in spite of its great size, was probably constructed, with the exception, perhaps, of a small portion at the crown, without centering support. It is 10 feet thick at the springing, and appears to have been built of solid brick and mortar in flat rings of masonry, not radiating, as with voussoirs, each ring being corbelled inwards to the curve and locking itself. Considering the size of the brick in comparison with the mass, the dome is a rigid brick concrete shell which might have stood upon a few separate supports, like the shell of an egg, without breaking away, provided the concrete was perfectly homogeneous throughout.

A remarkable feature in this building is its whispering gallery, already alluded to. The sounds that assail one on entering the chamber below are much intensified upon stepping into the gallery, by a passage through the dome, when the footfall of a single person is enough to awaken the echoes of the tread of a company. Strange weird sounds and mocking whispers emanate from the walls around. Loud laughter is answered by a score of fiends hidden behind the plaster. The slightest whisper is heard across from one side to the other, the ticking of a watch being quite audible, while a single loud clap is echoed over ten times distinctly.

Over the south doorway, within, is a large displayed inscription, boldly cut in three compartments. Each of these sections is a complete sentence in itself, and each, on computing the numerical value of the Persian letters, gives the date A.H. 1067 (A.D. 1656) as that of Muhammad's death. The sentences read :

The end of Muhammad has become laudable.
Muhammad Sultan whose abode is in Paradise.
The abode of peace became Muhammad Shah.

The portion added to the back, or north side, of the mausoleum is said to have been intended to afford a resting-place for Jahan Begum, the wife of Muhammad Shah, but it was never finished. She evidently refused to be so treated, and is supposed to have been buried at a spot some distance to the east of the city, where a mausoleum was commenced upon the same plan and scale as the Gol Gumbaz, with the same arrangement of corner towers. But the dome, in this case,

would have been much smaller, as it would have been carried by four inner walls enclosing the sepulchral chamber. It is quite possible that this was intended as the last resting-place of the mother of Sultan Muhammad.

Upon the west side of the Gol Gumbaz is its mosque, which is a fine building in itself, and worthy of notice, but it has been completely dwarfed by the great tomb beside it. On the south side is the Nagarkhana, or gallery for musicians, with the entrance gateway to the enclosure beneath it.

Not content with the capital of his fathers, Ibrahim II. was possessed with the mad idea of constructing another, to be called Nauraspur, upon a site but 4 miles off to the west. He summoned masons and 20,000 workmen from all quarters, and put the task under the superintendence of Nawab Shavaz Khan. His nobles and ministers, as well as the more wealthy merchants, were pressed into this work, and were prevailed upon to add their quota to the buildings rising upon the new site. What now remains of this ambitious undertaking are the ruins of the outer wall, enclosing more than half of the site, which, if completed, would have been as large again as Bijapur, or some 9 miles in circumference; the ruins of the Nauras, or Sangat Mahal, the Nari Mahal, and the Tagani Mahal, as well as mosques and tombs and other buildings of sorts are embedded in cactus and jungle. The Sangat Mahal was a duplicate, on a rather smaller scale, of the Gagan Mahal in Bijapur. Trouble with Nizam Shah of Ahmadnagar brought that State's troops down upon the unfinished works, which were completely wrecked, and all further construction was abandoned.

Bijapur depended for its water supply chiefly upon two sources, both without the city walls, which, when the city was invested by an enemy, was cut off; but provision to some extent was provided against this contingency by the number of reservoirs, or tanks, and wells, which, once filled, served the town for some time. The Begam Talao, to the south of the town, was one of these sources, from which place it was brought in through earthen pipes, embedded in concrete, with relieving towers at frequent intervals. The water, entering these

at a low level, was drawn off again at a high level, so as to leave its sediment behind, which was cleaned out at times, steps leading up the sides to give access, the top of the tower being open. This aqueduct led to distributing towers and tanks within the walls, whence smaller pipes, some of copper, connected up with the principal buildings and gardens. The other source was from Torweh, the site of Naurasapur, 4 miles out to the west. The water was brought in from here through a subterranean tunnel, which was lined with masonry on one side, the other side being the natural *murum* wall. As the strata, through which it is cut, slope athwart the direction of the tunnel, the subsoil water trickling from the one side was caught, while the masonry on the other side prevented leakage. What was thus caught formed a valuable addition to the flow from the head source. Among the principal reservoirs in the city are the Taj Bauri and the Chand Bauri, both important works.

There are many notable mosques, scattered about, singly, in different parts of the country, one of the most ornate being the Kala Masjid at Lakshmesvara, in the Dharwar district. It is in the same style of work as the Ibrahim Rauza at Bijapur. Its stone chains, hanging from the minarets and cornice, which are now sadly damaged, together with its beautiful tracery in perforated stone, make it one of the most elegant little mosques in Western India. The gateway to the courtyard is almost as grand as the mosque itself. These stone chains are still made at this town as souvenirs, many being intricately fashioned with double links, all loose and independent, and hollow fretted pendants with one or more loose, small, stone balls caged within them. Each chain and pendant is cut from a single stone. The town is full of the remains of old decorated Hindu and Jain temples.

MUHAMMADAN BUILDINGS IN SIND

OF Hindu remains in Sind, little is to be found, even in ruins, owing to the havoc wrought by the Arab conquerors. That such buildings did exist is plain from the great temple at Deval, which they destroyed, and the fragments built into the tomb of Jam Nindo at Thatha (Plate 57). A very interesting discovery was made, a few years ago, in a field near Mirpur-Khas, of a half-life-size bronze image of Brahma. When the Muhammadans began to settle in the land as rulers, they started building their tombs and mosques, but they displayed poor taste in their architectural endeavours. They sought to make up for their shortcomings in that respect by lavish decoration, occasionally in surface carving in stone, but more frequently in the application of coloured tile work, introduced from Persia, with which they literally covered their buildings (Plate 55). In the earlier tile-work there are some very beautiful designs, and, in many cases, good taste has been shown in the harmonious grouping of the few colours they used—two blues, cream, and white. Later on, when they added other colours, such as the various shades of green, brown, yellow, and even a dirty red, their work became garish, and would supply suitable patterns for cheap linoleum. The tombs of the Talpurs, at Haidarabad, are good examples of this.

Sind being pre-eminently a brick country, most of the buildings, particularly those covered with enamelled tiles, were built in that material, with stone foundations to save the brickwork from destruction by the *kalar*, or saltpetre, rising in the walls and pulverising them. With the exception of the tomb of Isa Khan, at Thatha, these mausolea are rather heavy and clumsy looking in outline, and, to some extent, are only saved by their elegant finials, and, in a few cases, by the very pleasing innovation and effective finish to the dome, the ornamental lantern, a very rare feature in India. These tombs are, as a rule, great cubical blocks of masonry surmounted

with heavy hemispherical domes. Save for the decorated façades, the walls are often bald plastered areas, which are relieved only by rows of shallow panels. There is but one door to most of them, and that too small in proportion to the heavy mass of walling above and around it; and there is seldom a porch, or any advanced shelter, to give a sense of dignity to the entrance. Yet, notwithstanding these defects, the mere mass makes them, to some extent, imposing; and, in their more or less neglected state, mellowed by age, they look better than they did when newly built. Of a more pleasing type are the few stone pillared buildings, decorated with surface fretwork after the manner of Fathipur-Sikri, the best example of which is the mausoleum of Isa Khan, already noticed (Plate 56). Marble is but sparingly used in Sind, and then only upon grave slabs and railings within the buildings.

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PLATE 1



THE GREAT CAVE AT KARLI

PLATE 2



INTERIOR OF THE GREAT CAVE AT KARLI



CAVE AT NASIK SHOWING WOODEN CONSTRUCTION



CHAITYA CAVE AT AJANTA

PLATE 4



FRONT OF *VIHARA* CAVE AT AJANTA



INTERIOR OF THE TIN TAL CAVE AT ELURA



EXTERIOR OF THE TIN TAL CAVE AT ELURA

PLATE 6



THE GREAT MONOLITHIC TEMPLE OF KAILASA AT ELURA

PLATE 7



COLOSSAL BUDDHA AT THE KANHERI CAVES



NAGARAJA AND NAGADEVI AT AJANTA

PLATE 8



PILLAR IN THE JAGANNATHA SABHA CAVE AT ELURA



PILLAR IN THE INDRA SABHA CAVE AT ELURA

PLATE 9



STRUCTURAL BUDDHIST CHAITYA AT TER



CAPITAL OF BROKEN COLUMN AT AJANTA

PLATE 10



THE THUL MIR RUKAN IN SIND



STUPA MOUND AT MIRPUR-KHAS IN SIND, BEFORE EXCAVATION



STUPA AT MIRPUR-KHAS, AFTER EXCAVATION



TERRA-COTTAS AND MOULDED BRICKS FROM STUPAS IN SIND



MORE TERRA-COTTAS AND MOULDED BRICKS FROM STUPAS IN SIND

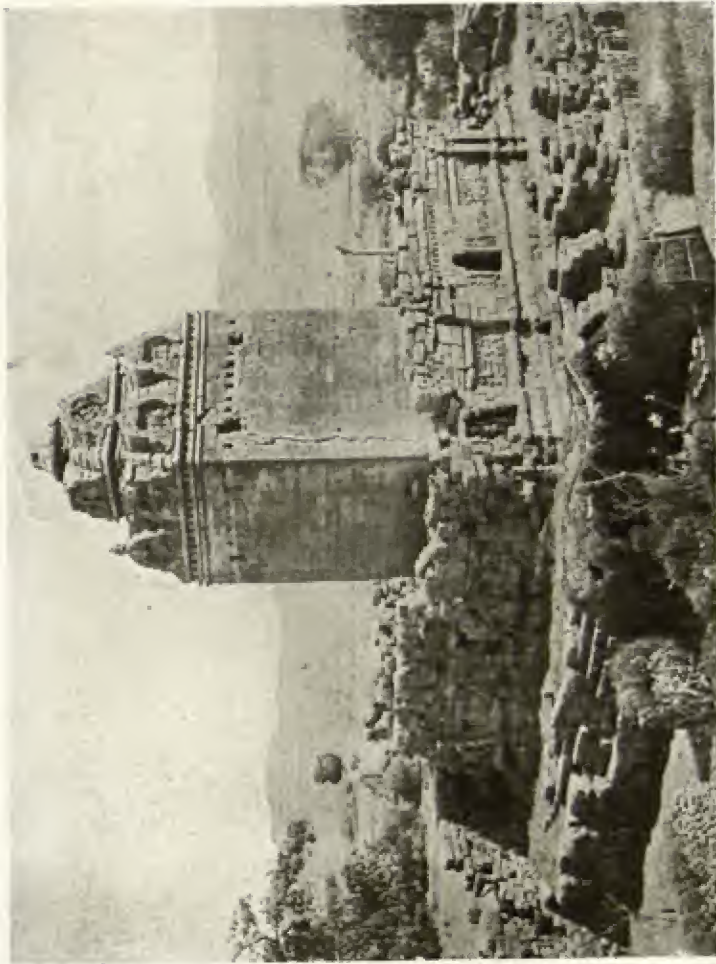
PLATE 14



IMAGE FROM THE MIRPUR KHAS
STUPA



HEAD OF A BUDDHA FROM THE MIRPUR KHAS
STUPA



OLD TEMPLE AT GOP IN KATHIAWAD

PLATE 16



OLD TEMPLE AT BILESVARA



OLD TEMPLE OF SURYA AT SUTRAPADA



THE TEMPLE OF MEGUTI AT AIHOLE



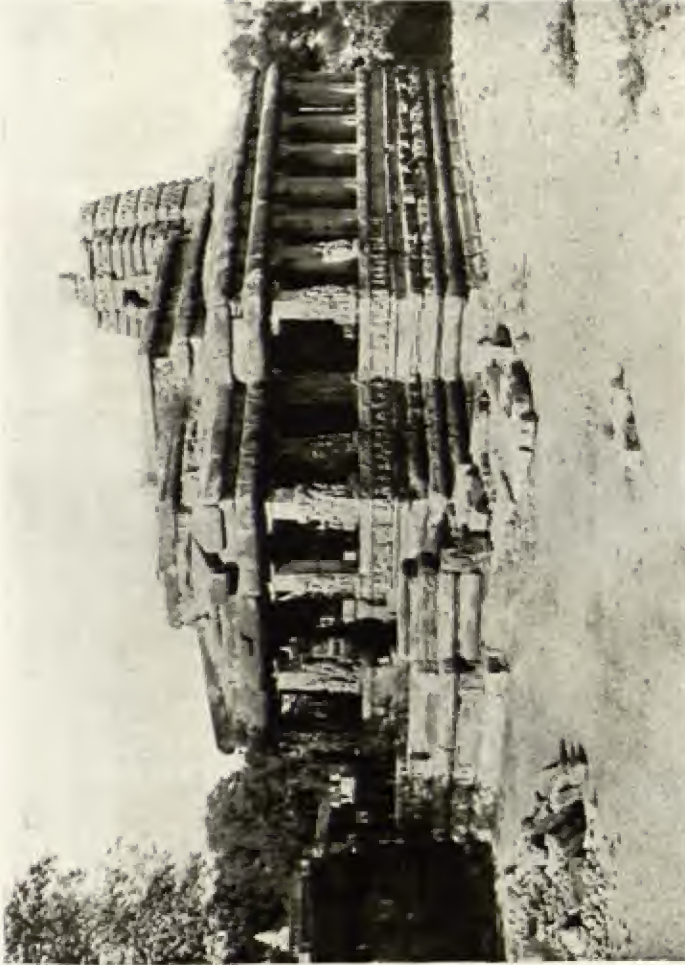
TWO STYLES OF TOWERS AT PATTADAKAL



INTERIOR OF THE TEMPLE OF VIRUPAKSHA
AT PATTADAKAL



INTERIOR OF LAD KHAN'S TEMPLE
AT AIHOLE

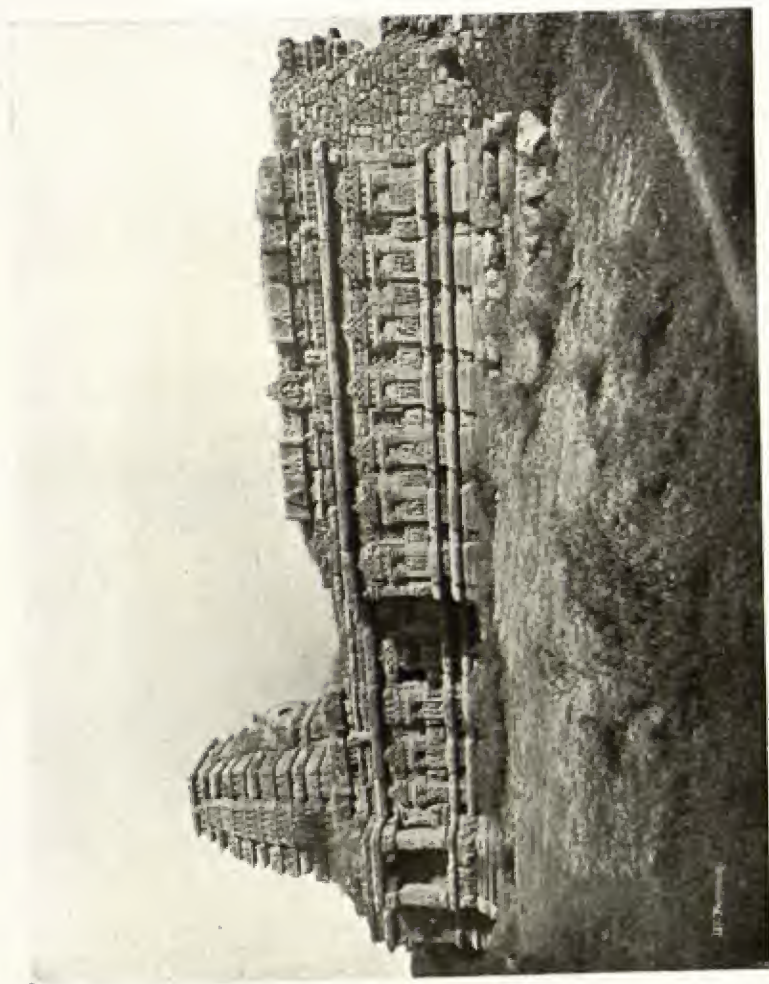


THE DURGA TEMPLE AT AIHOLE

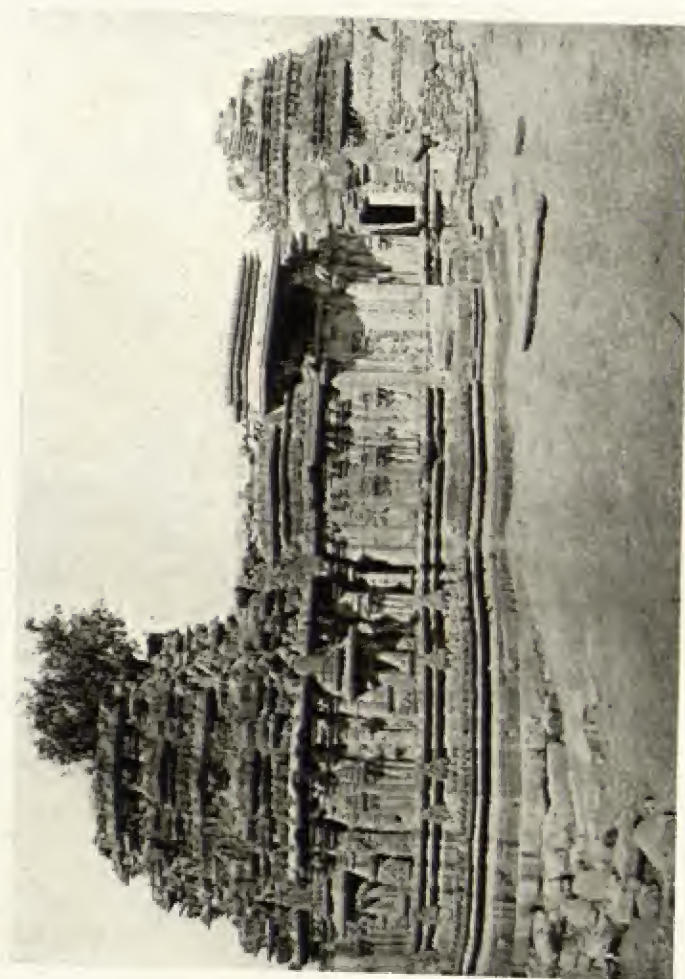
PLATE 20



THE TEMPLE OF VIRUPAKSHA AT PATTADAKAL



THE TEMPLE OF PAPANATHA AT PATTADAKAL.



THE TEMPLE OF KASIVISVESVARA AT LAKKUNDI



DOORWAY MOULDINGS OF THE TEMPLE OF KASIVISVESVARA



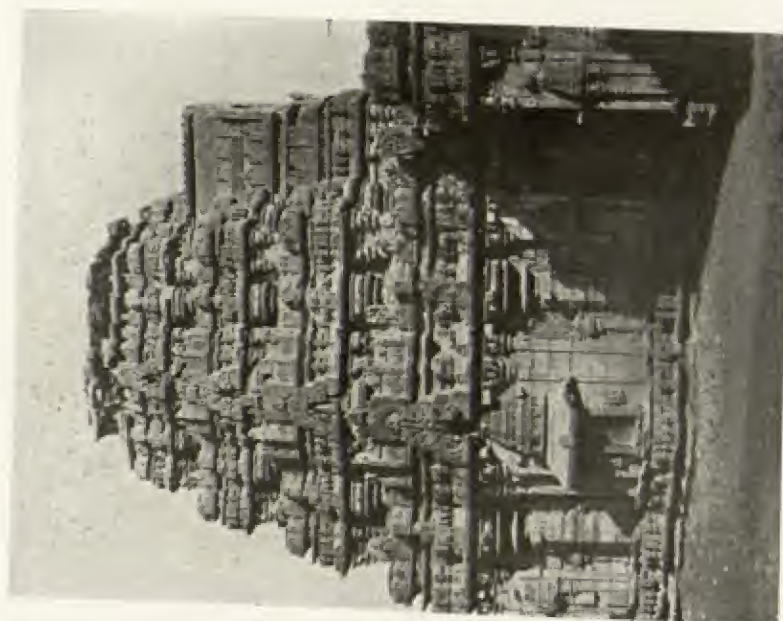
SCULPTURE ON THE WALLS OF A TEMPLE AT HALABID, MAISUR



THE TEMPLE OF MAHADEVA AT ITTAGI



CORNER SLAB OF CEILING OF HALL OF TEMPLE
AT ITTAGI



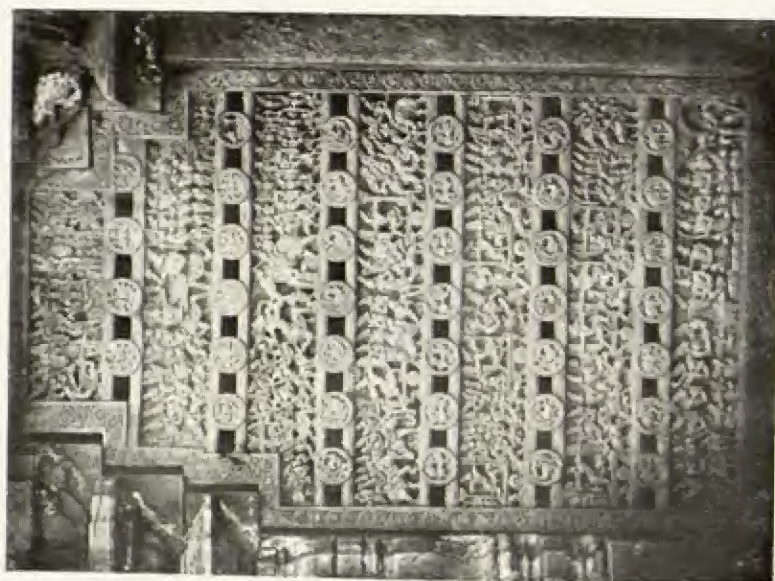
SHRINE WALLS OF THE TEMPLE AT ITTAGI



HOYSALA SCULPTURE FROM BALAGAMVE



INTERIOR OF TEMPLE AT ANNAVATTI



WINDOW IN A TEMPLE AT NARSAPUR



SCULPTURE AT BASE OF TOWER OF TEMPLE
AT BALAGAMVE



BRACKET FIGURE FROM A TEMPLE
AT KURUVATTI



IMAGE FROM NARAYANAPUR, IN
HAIDARABAD TERRITORY

PLATE 30



THE TEMPLE OF DODDA BASAPPA AT DAMBAL



THE WALLS OF THE TEMPLE AT DAMBAL



PILLAR IN THE TEMPLE OF SARASVATI
AT GADAG



ANOTHER PILLAR IN THE TEMPLE OF
SARASVATI AT GADAG



PILLARS OF THE RUDRAMALA AT SIDDHAPUR



GATEWAY OF THE TOWN OF DABHOI,
IN GUJARAT



THE TEMPLE OF SOMANATHA AT SOMANATHA-PATTAN, IN KATHIAWAD

PLATE 34



THE TEMPLE OF NAVALAKHA AT GHUMLI



THE TEMPLE OF NAVALAKHA AT SEJAKPUR



INTERIOR OF VIMALA SHA'S TEMPLE AT ABU

PLATE 36



CEILING IN VIMALA SHA'S TEMPLE AT ABU



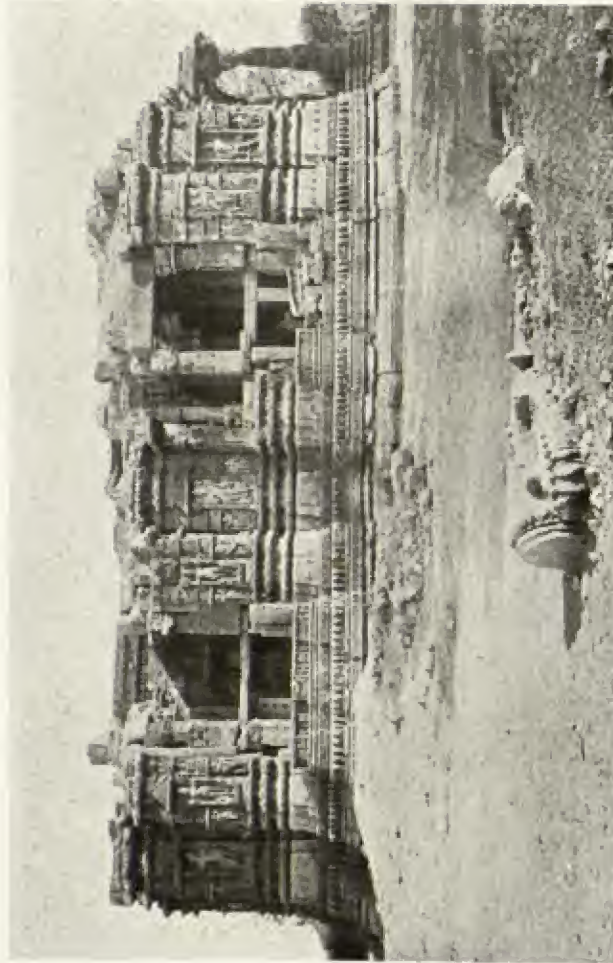
CENTRAL PENDANT OF CEILING OF TEJAHPALA'S TEMPLE AT ABU



CEILING PANEL FROM TEMPLE AT ABU



ANOTHER CEILING PANEL FROM TEMPLE AT ABU



TEMPLE OF THE SUN AT MUDHERA : CLOSED HALL



TEMPLE OF THE SUN AT MUDHERA; OPEN HALL



INTERIOR OF THE TEMPLE OF THE SUN AT MUDHERA



KIRTISTAMBHA AT VADNAGAR

PLATE 42



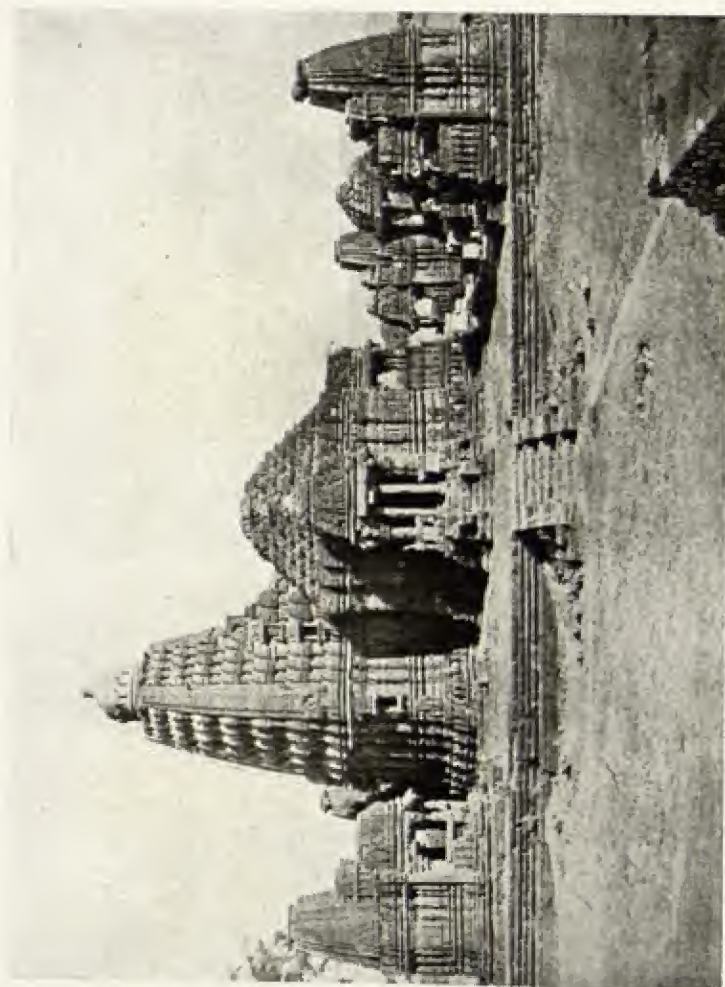
SOUTHERN PEAK OF SATRUNJAYA HILL



TORANA FROM TEMPLE AT ABU



THE TEMPLE OF AMBARNATHA



THE TEMPLE OF GOVINDESVARA AT SINNAR



ARCHITRAVE IN TEMPLE OF AESVARA AT SINNAR



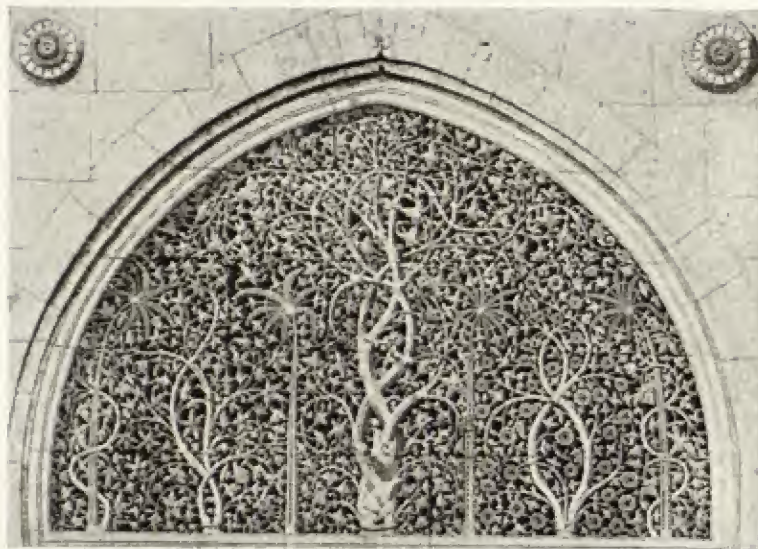
TEMPLE AT BALSANE



CENTRAL PORTION OF FAÇADE OF JAMI MASJID AT AHMADABAD



MOSQUE IN MIRZAPUR QUARTER AT AHMADABAD



WINDOW IN SIDI SAYYID'S MOSQUE AT AHMADABAD



7
RUINS OF *HARAM* AT SARKHEJ



QUEENS' TOMBS AT AHMADABAD



CEILING PANEL FROM THE JAMI MASJID AT CHAMPANSIR



THE JAMI MASJID AT BIJAPUR



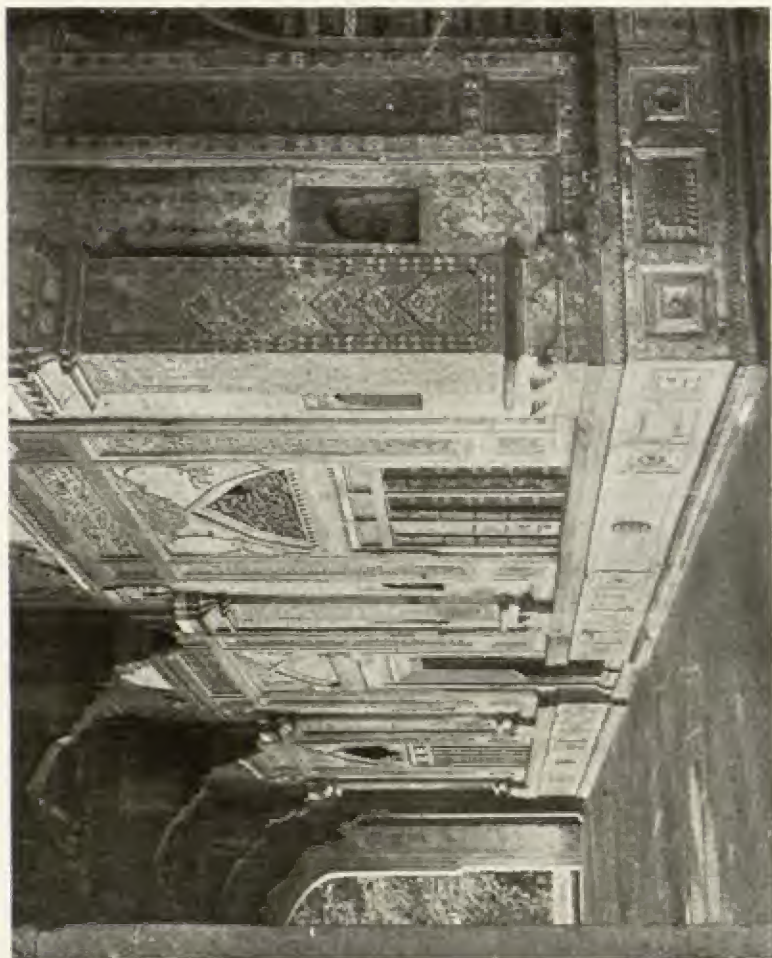
INTERIOR OF THE JAMI MASJID AT BIJAPUR



THE IBRAHIM RAUZA AT BIJAPUR



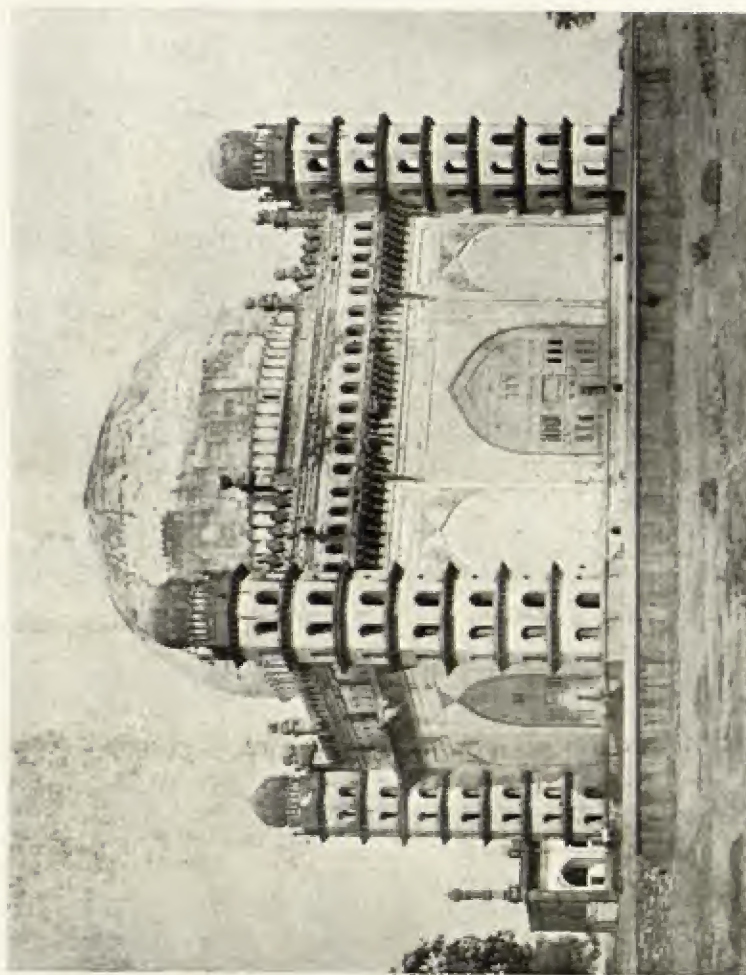
WINDOW IN THE IBRAHIM RAUZA AT BIJAPUR



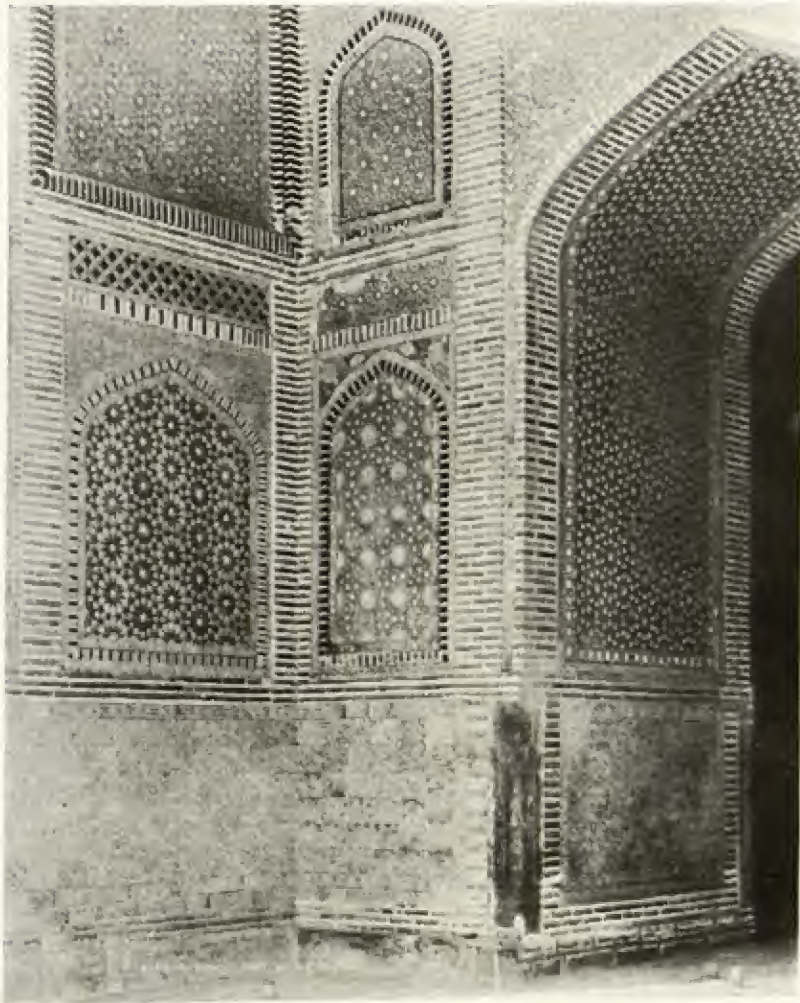
WALLS OF THE TOMB OF THE IBRAHIM RAUZA



THE MEHTAR-I-MAHAL AT BIJAPUR



THE GOL GUMBAZ AT BIJAPUR



COLOURED TILES IN THE WALLS OF THE JAMI MASJID AT THATHA



SURFACE CARVING ON A MIHRAB AT THATHA

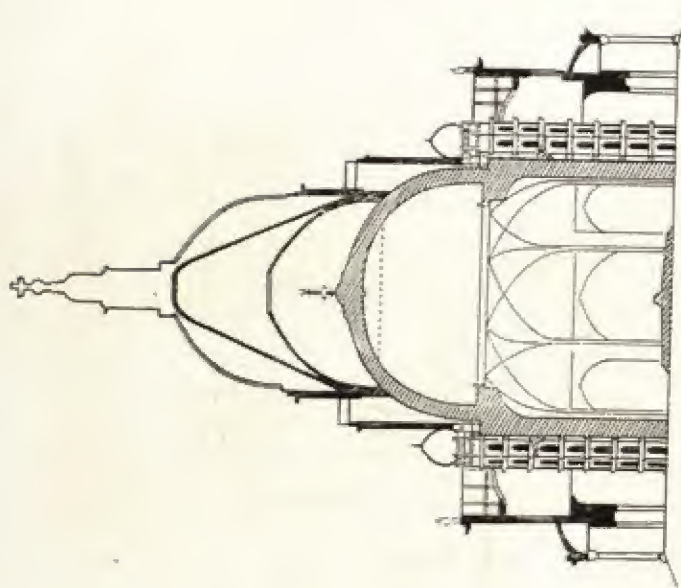
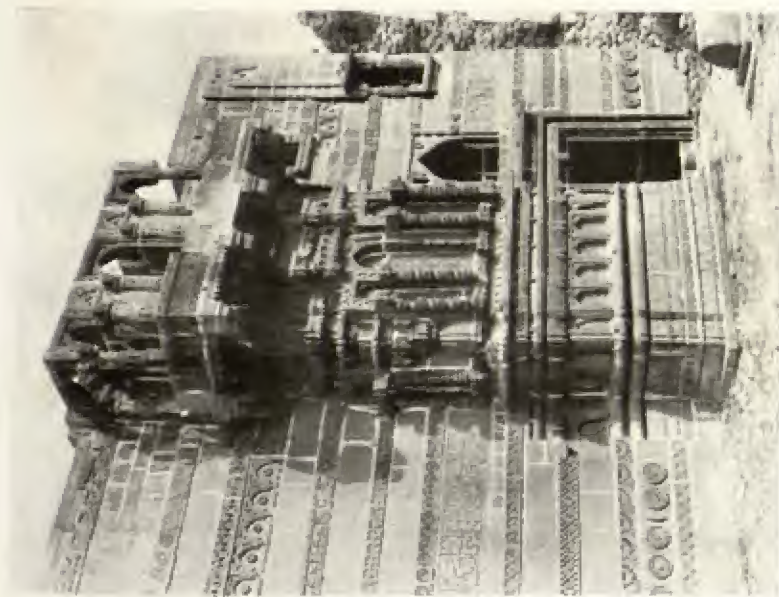
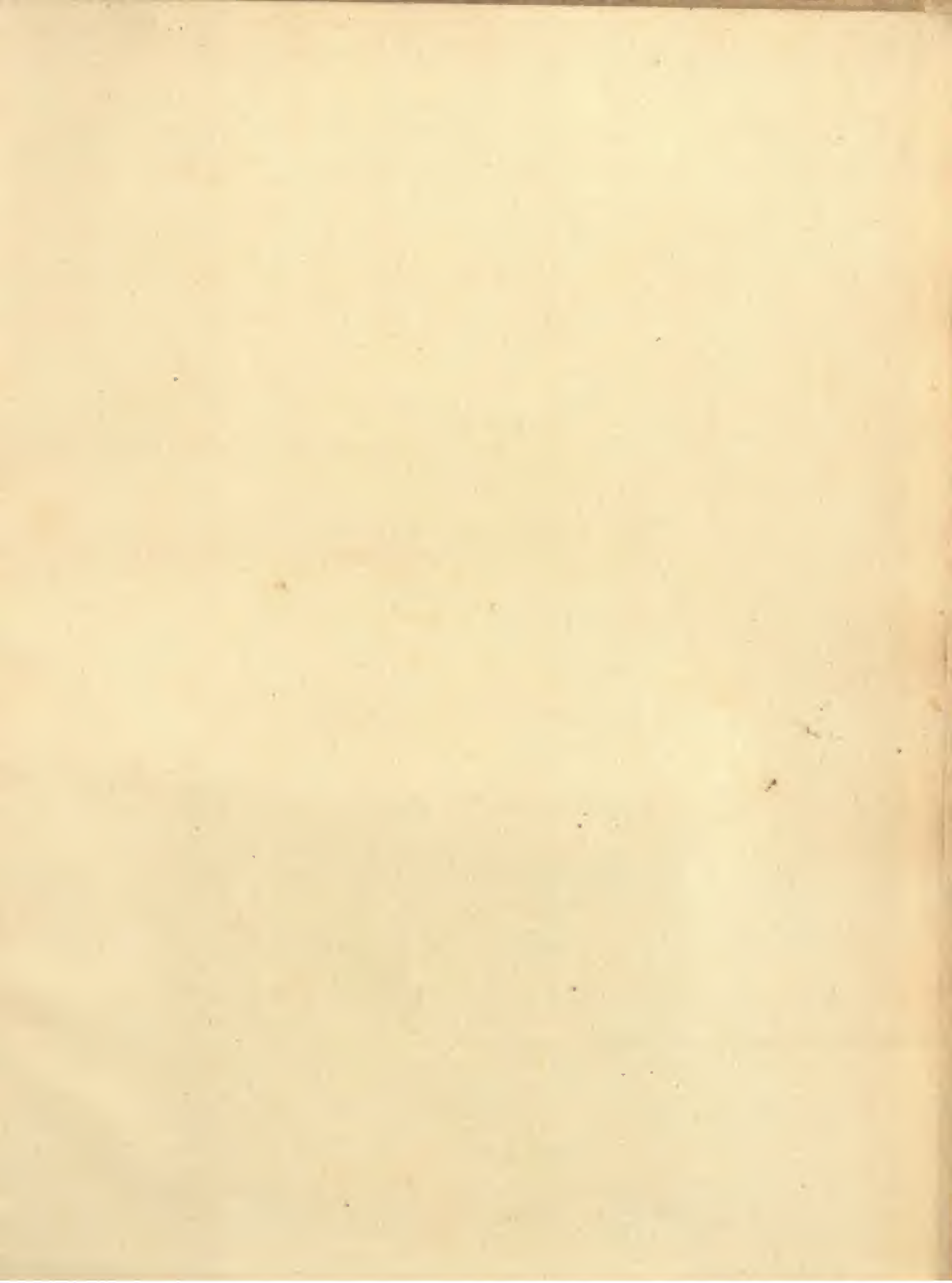


DIAGRAM SHOWING RELATIVE SIZES AND HEIGHTS OF
ST. PAUL'S AND THE GOL GUMBAZ AT BIJAPUR



THE TOMB OF JAM NINDU AT THATHA





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